

PCM-2300

SERVICE MANUAL

US Model

Canadian Model

AEP Model

UK Model



Model Name Using Similar Mechanism	DTC-57ES/750
Tape Transport Mechanism Type	DATM-100

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DIGITAL AUDIO RECORDER
SONY®

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ OR DOTTED LINE WITH MARK Δ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

**ATTENTION AU COMPOSANT AYANT RAPPORT
À LA SÉCURITÉ!**

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE Δ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER SES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

PRECAUTIONS FOR INSPECTIONS AND REPAIR WITH POWER OFF

Before beginning repair work after turning OFF the main switch, be sure to first remove CN932 (EH8P) of the power board. When assembling the equipment, be sure to plug this connector last. This is because, even with the main switch turned OFF, electric charges still remain in the smoothing capacitor in the power board. Therefore, if another flexible board is inserted or removed, a terminal of the power supply may short an adjacent terminal while destroying the device.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer: Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig.A)

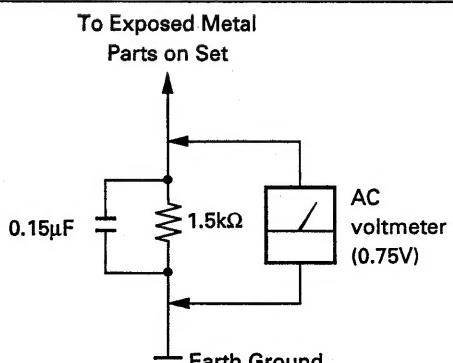


Fig. A. Using an AC voltmeter to check AC leakage.

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

ADVERSEL !

Lithiumbatteri – Eksplorationsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Lever det brugte batteri tilbage til leverandøren.

ADVARSEL

Lithiumbatteri – Eksplorationsfare.
Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverandøren.

VARNING

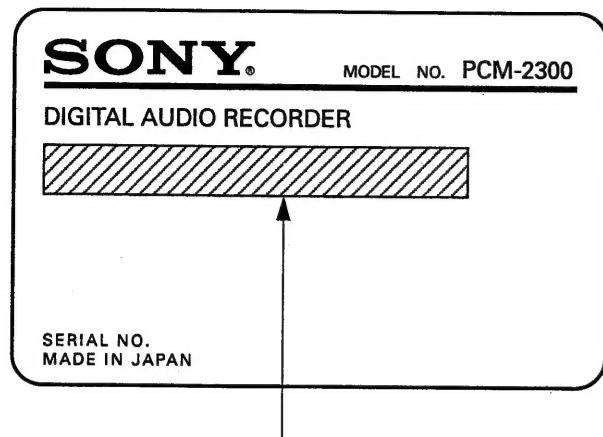
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använd batteri enligt fabrikantens instruktion.

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

MODEL IDENTIFICATION

- SPECIFICATION LABEL -



US,Canadian model : AC 120V 60Hz 33W
AEP, UK model : AC 220-240V~ 50/60Hz

This section is extracted from
instruction manual.

SECTION 1 GENERAL



8-3 Specifications

General	Power requirements USA/Canada model: 120 V AC ±10 %, 60 Hz Europe/UK model: 220 to 240 V AC ±10 %, 50/60 Hz	Power consumption USA/Canada model: 33 W Europe/UK model: 37 W	Operating temperature 5°C to 40°C (41°F to 104°F) Storage temperature -20°C to +55°C (-4°F to 131°F), without moisture condensation	Weight 7.2 kg (15 lb 14 oz)	Dimensions 430 x 125 x 350 mm (W/H/D) (17 x 4 15/16 x 13 7/8 inches), without the rack mount adaptor
Digital audio input and output section					
	Number of record channel 2 channels	Sampling frequency 48 kHz, 44.1 kHz, 32 kHz	Quantization 16-bit linear/12-bit non-linear	Error correction Double-encoded Reed Solomon code	Modulation system 8-10 modulation
Tape recording section					
	Format IEC digital audio tape cassette system DAT for professional use	Head Rotary head (2-head) (REC/PB x 2)	Drum rotation 2000 rpm (standard recording) 8.15 mm/sec. (standard mode)	Tape speed 4.075 mm/sec. (long-play mode)	Track pitch 13.6μm
					Digital audio tape
					Recording time 120 minutes (standard mode) 240 minutes (long-play mode) (with tape type DT-120)
Mechanical section					
	Fast-forward/rewind Within 60 seconds (with tape type DT-120)	Rise time 1.0 seconds or less (pause → play) 2.0 seconds or less (stop → play)	Searching speed 1.50 times max. normal playback speed	Cue/review speed Approx. ±3, ±8 times normal playback speed	8-2(E)

Input/output interface		Audio section	
Analog input	XLR-3-31 +4 dBs (factory set)	Frequency characteristic	20 Hz to 20 kHz, ± 0.5 dB (standard mode)
Connector	+24 dBs		20 Hz to 14.5 kHz, ± 0.5 dB (long-play mode)
Reference level	Approx. 10 kilohms, balanced		More than 86 dB (with A-weight filter)
Maximum level	-12 dBs to +8 dBs	Signal-to-noise ratio	Less than 0.07 % (standard mode)
Input impedance			Less than 0.3 % (long-play mode)
Adjustable range		Total harmonic distortion	(at reference level, 1 kHz)
Analog output	XLR-3-32 +4 dBs (load impedance 10 kilohms) (factory set)		Below measurable limit (± 0.001 %, W. Peak)
Connector	+24 dBs		
Reference level	Less than 50 ohms, balanced		
Maximum level	More than 600 ohms		
Output impedance	-12 dBs to +8 dBs		
Load impedance		Note	The reference level is the level at -20 dB from the full bit on the peak level meter scale.
Adjustable range			
Digital input	RCA phono jack IEC958 digital audio interface (Broadcasting studio use/consumer use)	Accessories	Wireless/wired remote commander (RM-D2300), Infrared pulse control/wired control
Connector	75 ohms, unbalanced		3 V.DC, with two size AA (R6) batteries
Format	± 0.1 % (each sampling frequency)		Approx. 63x19x175 mm (w/h/d)
Input impedance			($2\frac{1}{2} \times 3\frac{1}{4} \times 7$ inches)
Lock range			Weight
Digital output	RCA phono jack IEC 958 digital audio interface (Broadcasting studio use)		Approx. 130 g (4 oz) incl. batteries
Connector	75 ohms, unbalanced	Supplied accessories	Wireless/wired remote commander RM-D2300 with commander cable (1)
Format	75 ohms		Sony batteries SUM-3 (NS) (size AA (R6)) (2)
Output impedance			AC power cord (1)
Load impedance			Rack mount adaptor (2)
REMOTE	Standard Phone Jack		Screws (M3x28) (4)
Connector	Reference level		Screws (M5x12) (4)
Format	-27 dBs (load impedance 8 ohms) (PNONE LEVEL.. maximum)		Decorative washers (4)
Input level	Approx. 100 ohms		Operation manual (1)
	More than 8 ohms		Warranty card (1) (USA/Canada model only)
		Accessories recommended (Optional)	
			Cleaning cassette DT-10CL
			Design and specifications are subject to change without notice.

1-1 Principal concepts

The PCM-2300 is a digital audio tape recorder conforming to the DAT format standard. Playback/recording on compact DAT tape in the long play mode can be available by connecting the PCM-2300 to the professional audio equipments. In addition, The sub-codes which are recorded in different area with the audio signal enable you to perform a search function.

The writing or playback of time codes for professional use cannot be available with the PCM-2300.

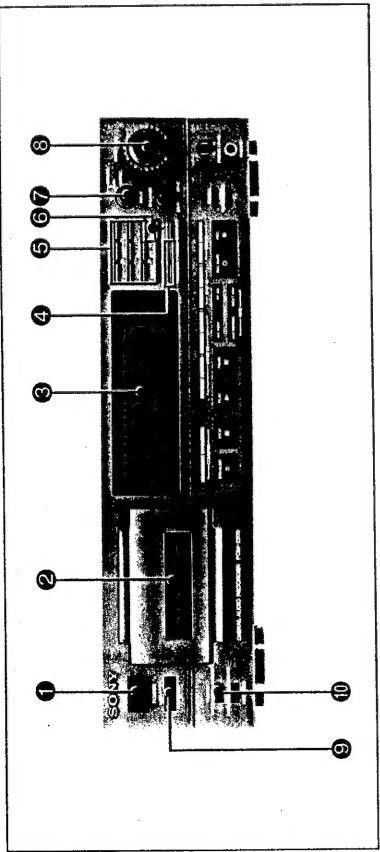
1-2 Features

- (1) **Digital Audio Recorder Compatible With DAT Format Standard**
Audio signals are converted into 16-bit quantized digital data for recording and playback realizing pure reproduction with virtually no degradation in sound quality. Moreover, the basic tape format is compatible with consumer-use DAT equipment.
- (2) **Professional-use Digital I/O**
Digital I/O terminals (unbalanced phono jacks) conform to the professional format standard (IEC958-TYPE I*) enabling digital dubbing using another PCM-2300. The digital input terminals also accept consumer format (IEC958-TYPE II*) signals for digital recording from consumer-use equipment.
- (3) **Wide-range Analog I/O Level Adjustment**
Rear panel signal level adjustment function for the balanced type (XLR) analog I/O jacks covers a wide adjustment range from professional-use to consumer-use levels.
- (4) **2-Head, 2-DD Mechanism**
The PCM-2300 employs usual two-head (Recording/playback) system. Moreover, two motors of drum and capstan offer direct-drive operation for improved tape transport stability.
- (5) **Compatible With Various Sampling Frequencies (Fs)**
Allows recording and playback in both standard play (SP) mode and long play (LP) mode compatible with consumer-use equipment. Analog recording is possible at sampling frequencies of 48 kHz (SP), 44.1 kHz (SP) and 32 kHz (LP), and digital recording is possible at sampling frequencies of 48 kHz (SP), 44.1 kHz (SP) and 32 kHz (SP/LP). Playback is possible at all frequencies and modes.
- (6) **Remote Control Operation**
Wireless/wired remote control is possible using the supplied RM-D2300 remote commander.
- (7) **Various Subcodes and Search Functions**
In addition to the Start ID, Skip ID and End ID, other subcodes such as the absolute time and program number can be recorded in and read from the tape's subcode area to provide a wide variety of convenient DAT search functions.
- (8) **Built-in Date Function**
A dedicated built-in clock is used to automatically record the date (year/month/day), day of the week, and time (hour/minute/second) in the tape's subcode area, allowing confirmation of the date and time of recording during playback.
- (9) **Multi Display Provides Quick Access to Many Types of Information**
In addition to displaying the program number and various types of time/counter data, this display is provided with features including a 21-segment peak level meter and a 0.5 dB-step peak margin indicator.
- (10) **Rack Mounting Compatibility**
Use of the supplied adapter allows mounting in a standard 19" rack.

Note

TYPE I or *TYPE II* stands for the followings:
INTERNATIONAL STANDARD IEC958 (Digital audio interface)
TYPE I: Channel status application for "Broadcasting studio use"
TYPE II: Channel status application for "Consumer use"

2-1 Front Panel



- ① POWER switch** Turns the power on and off.

② Cassette compartment Insert a cassette with the window side up and the safety tab facing you.

③ Display window

④ DATE button

RECORDED: Press to display the recording day of the tape being played.

PRESENT: Press to display the current time.

Each time the RECORDED or PRESENT button is pressed, year, month, and day display or time, minute and second display is switched respectively.

⑤ Music select buttons

Numeric buttons (0-9): Designate the desired program number to be played back before starting playback.

CLEAR: Use to cancel the program number which has been mistakenly entered.

⑥ COPY PROHIBIT button

Press to write the copy prohibit code on the tape so that the COPY PROHIBIT indicator appears on the display.

⑦ INPUT selector Set according to the signal to be recorded.

ANALOG: Selects when recording from the equipment connected to the ANALOG IN jacks. In this mode, the sampling frequency of 48 or 44.1 kHz is also selected.

DIGITAL: Selects when recording from the equipment connected to the DIGITAL IN jack.

⑧ INPUT LEVEL control

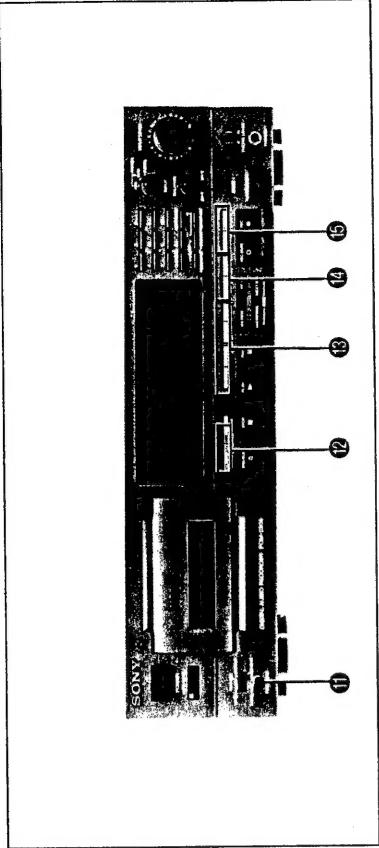
Adjust the recording level for the analog input signals. Normally set to the 10 (MAX) position. When recording digital signals, it is not necessary to adjust the recording level.

⑨ Remote sensor

Receives the signal from the wireless remote commander.

⑩ REMOTE switch

Switches between the wireless remote commander and wired remote commander.



- ① REC MODE selector**
Normally set to STANDARD.
When this selector is set to LONG, you can record analog input signals or digital signals with 32 kHz in the long-play mode.

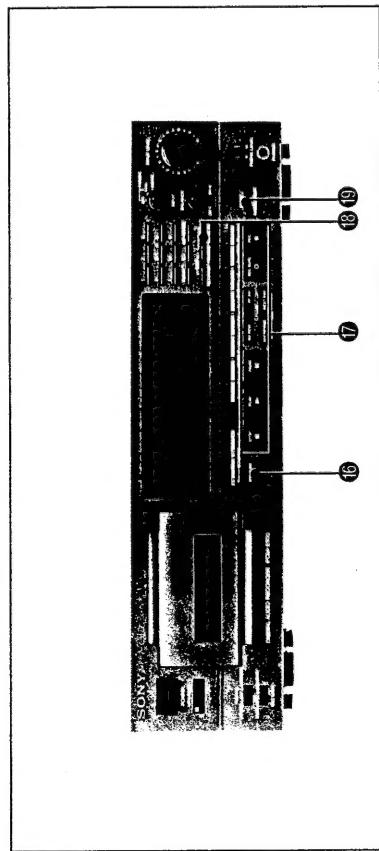
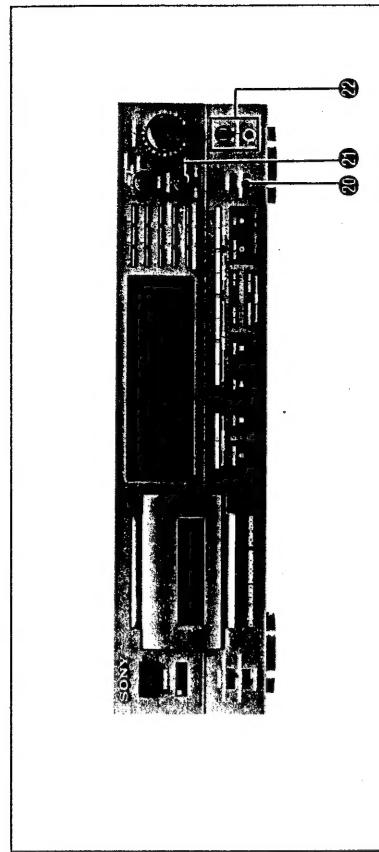
② COUNTER buttons
MODE: Selects the counter display in the display window among the linear counter (tape running time), absolute time, elapsed time of the selection, and total remaining time of tape. Each time you press the button, the display changes sequentially.
RESET: Resets the linear counter to "00 00".

③ START ID buttons
AUTO: Press to turn on and off the AUTO indicator. When the AUTO indicator is lit, the start ID will automatically be written during recording. The leading edge of the signal level for analog input or U-bit of the interface for digital input is detected and start ID is automatically written.
RENUMBER: Press to renumber all programs on the tape. When only the start IDs are written, pressing this button will insert the proper program numbers beginning with "1". The tape will rewind and start from the beginning to accomplish this function.

WRITE: Press to write the start ID at the desired point during recording or playback.
ERASE: Press to erase the start ID. When a start ID and a program number are written on the tape, both codes are simultaneously erased by pressing this button.

④ SKIP ID buttons
WRITE: Press at the beginning of the portion you may wish to skip later. A skip ID will be written from the point where you pressed this button.
ERASE: Press to erase the nearest skip ID which is before the current position.

⑤ END ID buttons
WRITE: Press to write the ID signifying the end of playback or recording.
ERASE: Press to erase the end ID.



⑯ OPEN/CLOSE button
Press to open or close the cassette compartment.

⑰ Tape operating buttons

■(stop): Press to stop recording or playback.
▶(play): Press to play back the tape.

■(pause): Press to stop for a moment during recording or playback. To restart recording or playback, press this button again or press ▶. If the unit is left in the pause mode for about 10 minutes, it will automatically be released and the deck will enter the stop mode. To restart recording or playback from the stop mode, press ● or ▲ respectively.

◀◀(PREVIOUS)/▶▶(NEXT) (AMS): Press to locate the beginning of the selection during the playback.

◀◀(REW)/▶▶(FF) (rewind/review, fast-forward/cue): In the stop mode, press to rewind/fast-forward the tape. During playback, press to rewind or fast-forward the tape while listening to the sound.

○(record muting): Inserts a sound-muted portion (space).
●(recording): Press to set the unit to record-pause mode. After pressing this button, press ■ or ▲.

⑮ CLOCK SET button
Press to adjust the time of the clock built in this unit.

In this mode, The COPY PROHIBIT button and the 0 button function as the + and - buttons respectively.

⑯ FADE button
Press to fade in or fade out during recording or playback.

⑳ MARGIN RESET button
Press to reset the margin of peak level.

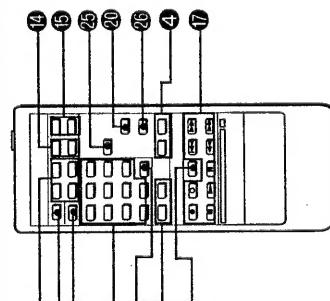
㉑ BALANCE control

Adjust the recording level balance for the analog input signal. Turning the knob counterclockwise increases the level of CH1(L) while turning it clockwise increases the level of CH2(R).

㉒ Headphones jack and PHONE LEVEL control
The PHONE LEVEL control adjusts the headphones volume level.

2-2 Remote Commander

2-2-1 Wireless / Wired Remote Commander (Supplied)



Buttons with the same numbers as those on the main unit have the same function.

The following functions are operated only with the remote commander.

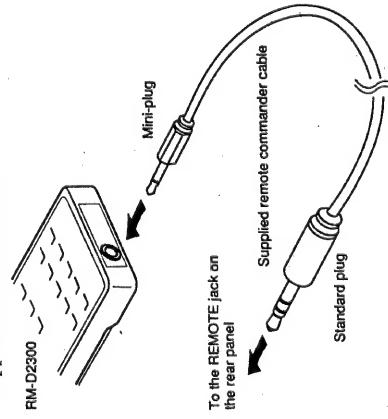
② DISPLAY MODE button
Change the display mode.

② MUSIC SCAN button
Use this feature to listen to the beginning of each selection successively.

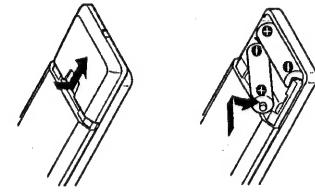
⑤ REPEAT button
Press to play a desired portion repeatedly. Each time you press the button, the indication changes as follows: REPEAT 1 → REPEAT ALL → off

④ SKIP PLAY button
Press to activate the skip ID code function. The portion of the tape previously marked will be skipped.

* This remote commander can be used in wireless mode or wired mode. Normally use it as a wireless remote commander, or it functions as a wired remote commander by connecting the remote commander to the REMOTE jack on the rear panel with the supplied commander cable.



Installing Batteries



Insert two size AA (R6) batteries with correct polarity, and close the lid.

Notes on remote control

- Be sure to install the batteries even when the remote commander is used as a wired remote commander.
- Do not expose the remote sensor on the deck to strong light such as direct sunlight, lighting apparatus, etc.
- Do not place any obstructions between the Remote Commander and the remote sensor, or else operations will not be performed correctly.
- The controllable range is limited. Point the Remote Commander directly at the remote sensor on the deck within 5 meters and 30 degrees.
- When remote control operation distance becomes shorter, the batteries are weak. Replace both batteries with new ones.

To avoid battery leakage

When the commander will not be used for a long period of time, remove the batteries to avoid damage caused by battery leakage and corrosion.

Battery life

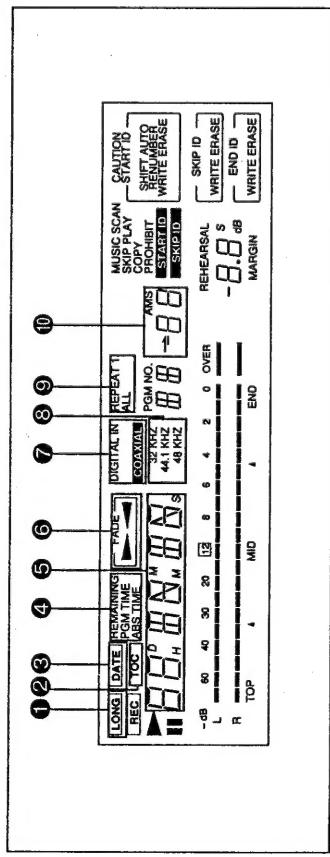
About half a year of normal operation can be expected when using the Sony SUM-3 (NS) batteries (size AA (R6)).

Mode switching and connections of the remote commander

Remote commander mode	Setting of the remote switch on the front panel	Connection of the jack of the remote commander	Connection of the REMOTE jack on the rear panel
Wired mode	WIRED	Connect the mini-plug of the commander cable	Connect the standard plug of the commander cable
Wireless mode	WIRELESS	Disconnect the cable	Disconnect the cable
No use	OFF	Disconnect the cable	Disconnect the cable

* The mini-plug of the commander cable may be disconnected from the remote commander. To prevent it, operate the wired remote commander on a stable place.

2-3 Display Window



① LONG play mode indicator
Lights when recording or playback is being performed in the long play mode.

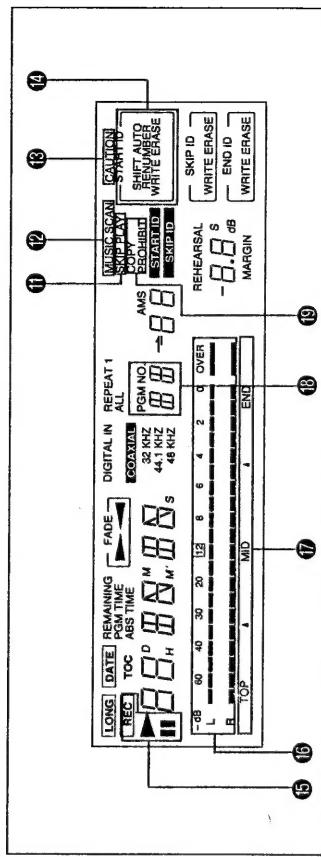
② TOC (Table Of Contents) indicator
When a pre-recorded DAT cassette tape with TOC is played back, this indicator will light.

③ DATE indicator
Lights when the RECORDED button is pressed to display the recording day of the tape being played. Blinks when the PRESENT button is pressed to display the current time.

**④ REMAINING (remaining time):
PGM TIME (program time):**
Lights when the counter shows the remaining time of the tape.
Lights when the counter shows the elapsed time of the current selection.

ABS TIME (absolute time) indicator:
Lights when the counter shows the elapsed time from the beginning of a tape.

⑤ Time indicator
Indicates the tape running time, absolute time, elapsed time of the current selection, remaining time or recording day. Each time the COUNTER MODE button is pressed, the display is changed.



⑪ SKIP PLAY indicator
When this indicator is lit during playback, the portion marked by the skip ID is skipped and playback continues from the next start ID.

⑫ MUSIC SCAN indicator
Lights after the MUSIC SCAN button on the wireless remote commander is pressed to listen to the beginning of each selection successively.

⑬ CAUTION indicator
Lights when moisture condensation occurs. If this happens, the deck stops functioning automatically. (See page 8-1.)

⑭ START ID mode indicators
AUTO: Lights when the AUTO button is pressed to write the start ID automatically.
RENUMBER: Lights when the RENumber button is pressed to renumber the program numbers.

⑮ FADE indicator
ERASE: Lights when erasing the start ID.
AUTO RENUMBER: Lights when renumbering program numbers automatically.
SHIFT RENUMBERING: Lights when shifting the start ID and program number position manually.

⑯ PGM NO. indicator
Shows the program number of the selection being played.

⑰ Frequency map indicator
Bars indicating the sampling frequencies with which the tape was recorded appear on the peak level meters. (Refer to page 6-4.)

⑱ Tape operation indicators
RE: Lights during recording or in the record-pause mode.

►: Lights during recording or playback. It also lights in the record-pause mode or in the play-pause mode.

■: Lights in the record-pause mode or in the play-pause mode.

□: Lights in the play-pause mode.

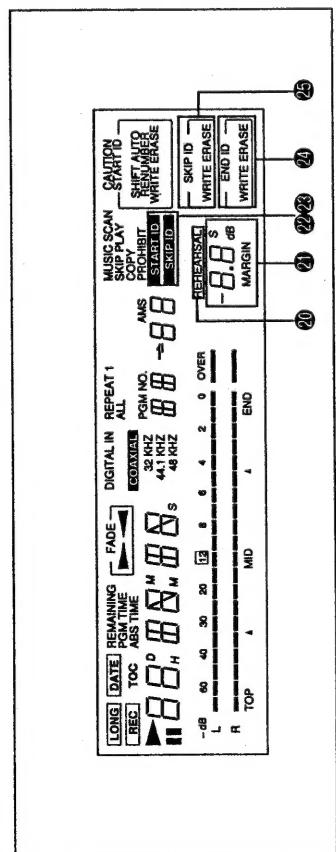
□: Lights in the record-pause mode or in the play-pause mode.

⑲ Peak level meters
Indicate the peak value of the audio signal being recorded during recording or the peak value of the audio signal recorded on the tape during playback.

⑳ Frequency map indicator
Bars indicating the sampling frequencies with which the tape was recorded appear on the peak level meters. (Refer to page 6-4.)

㉑ PGM NO. indicator
Shows the program number of the selection being played.

2-4 Rear Panel



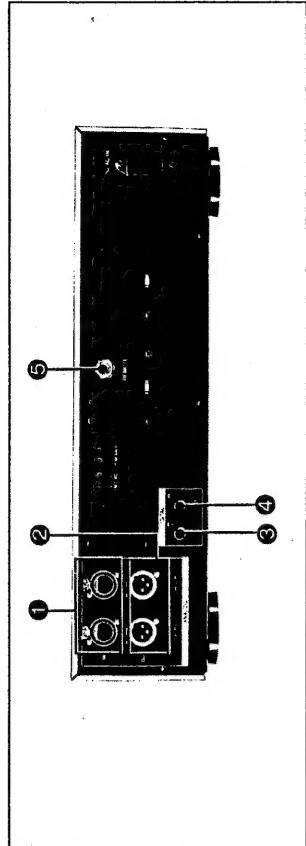
① REHEARSAL indicator
Lights while the rehearsal function is activated (page 5-6).

② MARGIN indicator
Shows how much margin there is between the peak level of input audio signal and 0 dB.

③ START ID indicator
Blinks when writing (for 9 or 18 seconds) or erasing a start ID code, and lights when the start ID is detected during playback.

To turn off the display window
When the power is turned on, the display window also is turned on. During recording or playback, all display or some parts of the display can be turned off.
Each time the DISPLAY MODE button on the Remote Commander is pressed, the indicators change as follows:

- Normal indicators →
Peak level meters and margin indicators go off.
→ All the indicators go off.



① ANALOG IN jacks (CH 1 (L)/CH 2 (R))
XLR type connector
For analog audio signal input.

② ANALOG OUT jacks (CH 1 (L)/CH 2 (R))
XLR type connector
For analog audio signal output.

③ DIGITAL IN jack (Phono jack)
For digital audio input of professional-use digital signal (IEC 958-TYPE II).

④ DIGITAL OUT jack (Phono jack)
For digital audio output of professional-use digital signal (IEC 958-TYPE I).

⑤ REMOTE jack
Standard phone jack for Wired Remote Commander. To be connected to the supplied Remote Commander RM-D2300 with the commander cable.

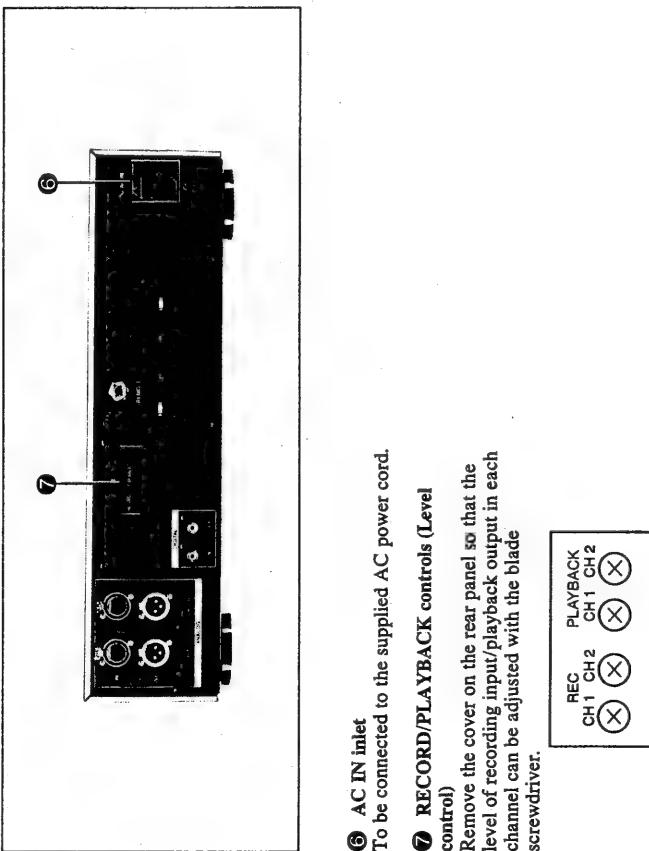
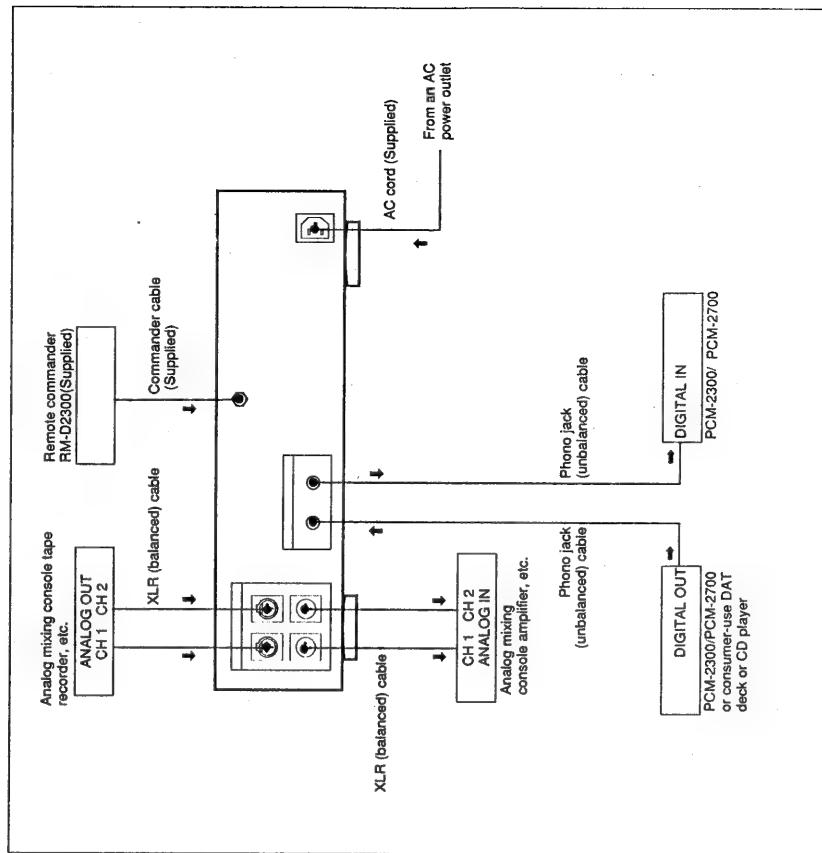
⑥ DIGITAL IN jack (Phono jack)

For digital audio input of professional-use digital signal (IEC 958-TYPE II). Consumer-use digital audio signal (IEC 958-TYPE II) can also be input.

3-2 Connection

Notes on connection

- Before connecting the unit, turn off the power switch.
- The cable connectors should be fully inserted into the jacks.
Loose connection may cause hum and noise.



⑥ AC IN inlet
To be connected to the supplied AC power cord.

⑦ RECORD/PLAYBACK controls (Level control)
Remove the cover on the rear panel so that the level of recording input/playback output in each channel can be adjusted with the blade screwdriver.

REC	PLAYBACK
CH1 CH2	CH1 CH2
(X)	(X)

3-3 Preparation

3-3-1 Clock Setting

This unit employs a built-in clock to keep track of the current date and time. Once you set the date and time, this information will be recorded on the tape along with the audio signal during recording. This function is very convenient because it allows you to check when the tape was recorded when playing the tape later.

Setting the date and time

- Example: Setting the clock to 10:30 a.m., July 4, 1992 (Saturday)
- | | |
|-----------------------------------|---|
| Setting the date | Flashes |
| 1 Display the date. |   |
| 2 Set the year. |   |
| 3 Set the month. |   |
| 4 Set the day. |   |
| 5 Complete the setting procedure. |  Lights |

Setting the day of the week

- | | |
|---|--|
| 1 Display the day of the week. |   |
| 2 Set the day of the week. |   Lights |
| 3 Complete the setting procedure. |   |
| 1 Display the time. |   |
| 2 Set the hour. |   |
| 3 Set the minutes. |   |
| 4 Set the seconds to 0. |   Lights |
| 5 Start the clock simultaneously with the signal from a timecast (telephone, etc.). |   Lights |

To confirm the date or time

Press the PRESENT button to display the date or time. One press displays the date and two presses displays the time. To return to the original counter display, press the COUNTER MODE button.

Time display

The time is displayed in 24-hour format.

Midnight: 0:00

Noon: 12:00

The day of the week is displayed as follows.

Sunday	S U
Monday	M O
Tuesday	T U
Wednesday	W E
Thursday	T H
Friday	F R
Saturday	S A

Built-in clock

This unit's built-in clock operates using a quartz oscillator, and time variations caused by changes in temperature, etc., may accumulate. For precise recording of hour, minute, and second data by the built-in date function, it is recommended to set the clock every time the recording is performed.

Precautions when setting the time

- Set the time while the tape is stopped.
- Although this unit's clock automatically adjusts for leap years and long and short months, do not enter a date which does not exist.

Note

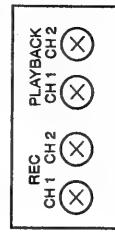
This unit uses a back-up battery to keep the clock running when the power is turned off. The life of the battery under normal use is approximately five years. When the battery starts to run down, the clock will stop operating normally. When this occurs, have the battery replaced at your dealer or nearest Sony Service Center (a battery replacement fee is required).

3-3-2 Adjusting Analog Input/Output Level

The analog input/output reference level during recording or playback can be adjusted on this unit. The input/output reference level is factory set to +4 dBs at -20 dB from the full bit level. The adjustable range of the reference level is +8 dBs to -12 dBs.

Procedure of adjusting analog input/output level

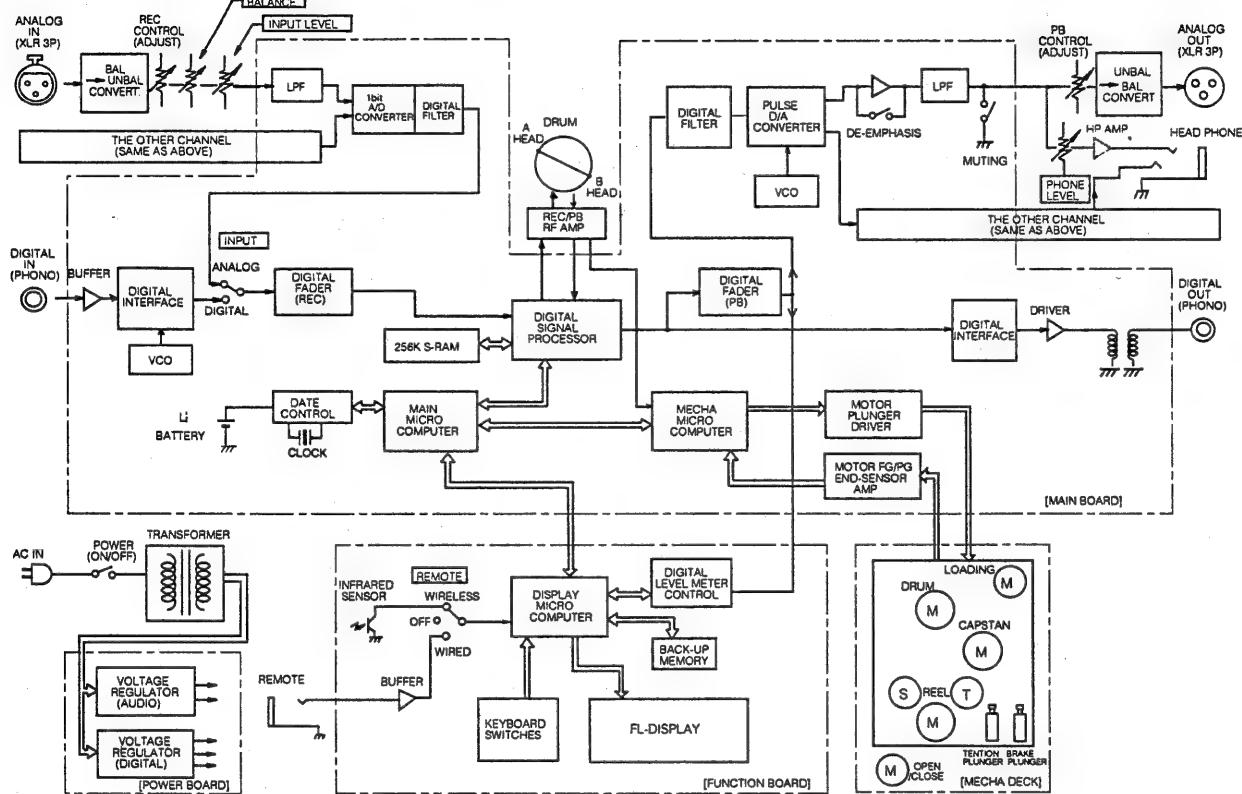
- (1) Remove the cover of the RECORD/PLAYBACK controls on the rear panel.
- (2) Playback the tape recorded in the level at -20 dB from the full bit. Adjust the PLAYBACK (CH 1/CH 2) volume so as to obtain the desired levels.
- (3) Set the INPUT LEVEL control on the front panel to the 10 (MAX) position, input an audio signal to the ANALOG IN jacks and adjust the RECORD (CH 1/CH 2) controls so as to obtain the desired levels at ANALOG OUT jack.



- Adjust the RECORD/PLAYBACK controls with the blade screwdriver and be sure not to turn the controls forcibly nor to touch any other parts than the RECORD/PLAYBACK controls.

- (4) Put the cover of the controls.

8-4 Block Diagram



SECTION 2

DISASSEMBLY

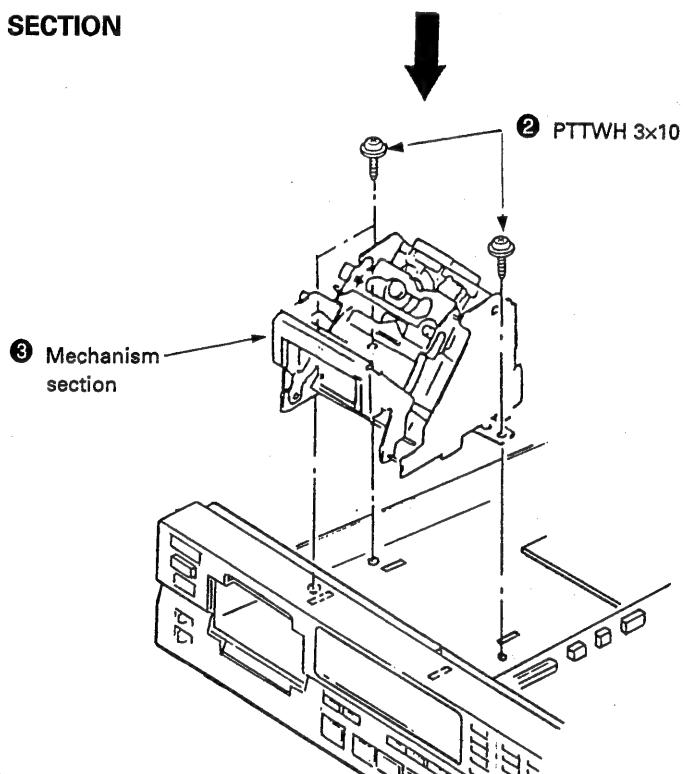
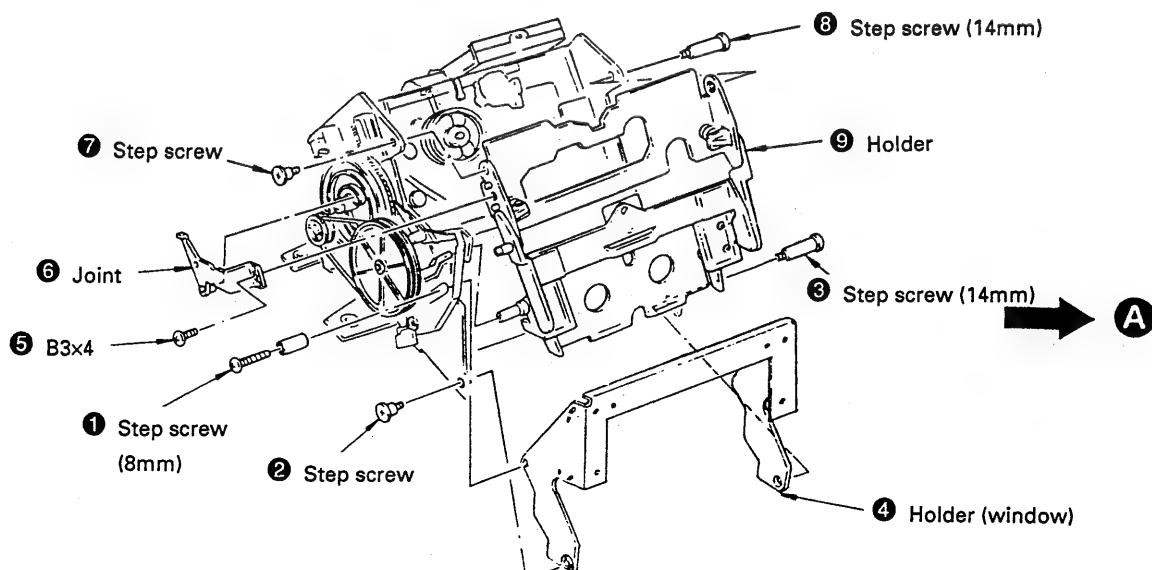
- Remove the following devices shown by ①, etc. In the order of the numbers.

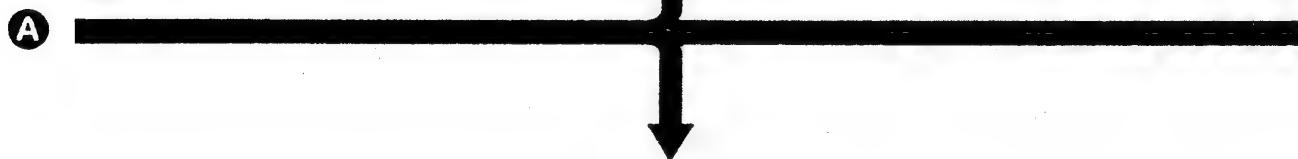
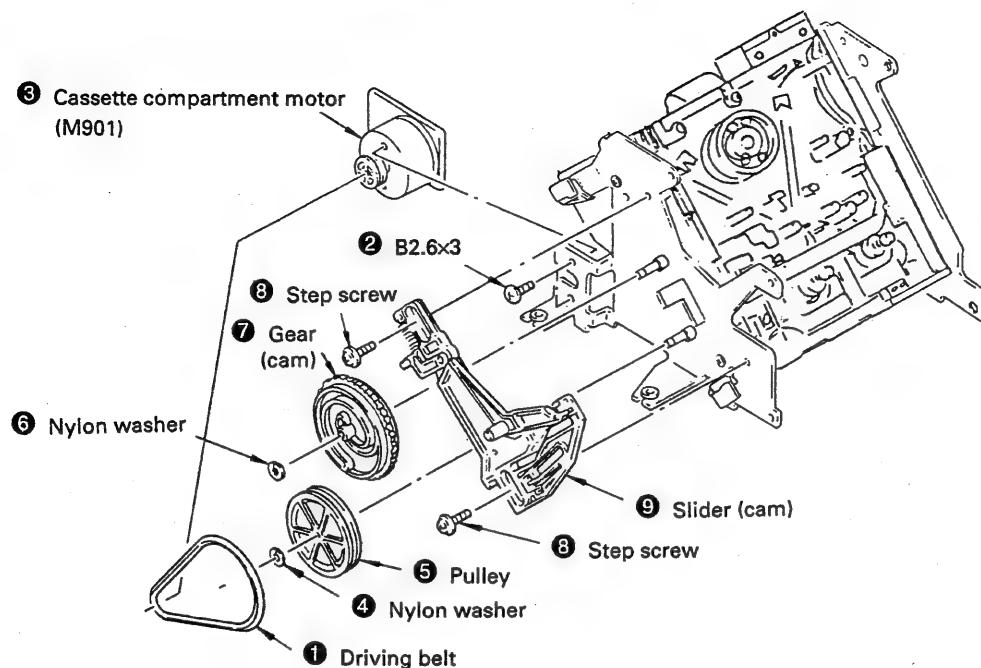
[CASE]

Unscrew the four case attachment screws and remove the case.

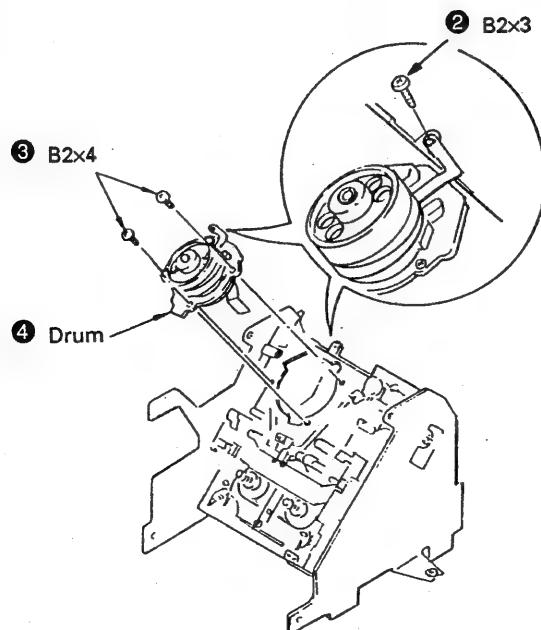
[CASSETTE WINDOW]

- ① Press the OPEN/CLOSE switch to effect LOADING OUT STATE (if power is not supplied) rotate the pulley in the left side of the Mechanism Deck counterclockwise.)
- ② Remove the cassette by lifting the window up.

MECHANISM SECTION

HOLDER


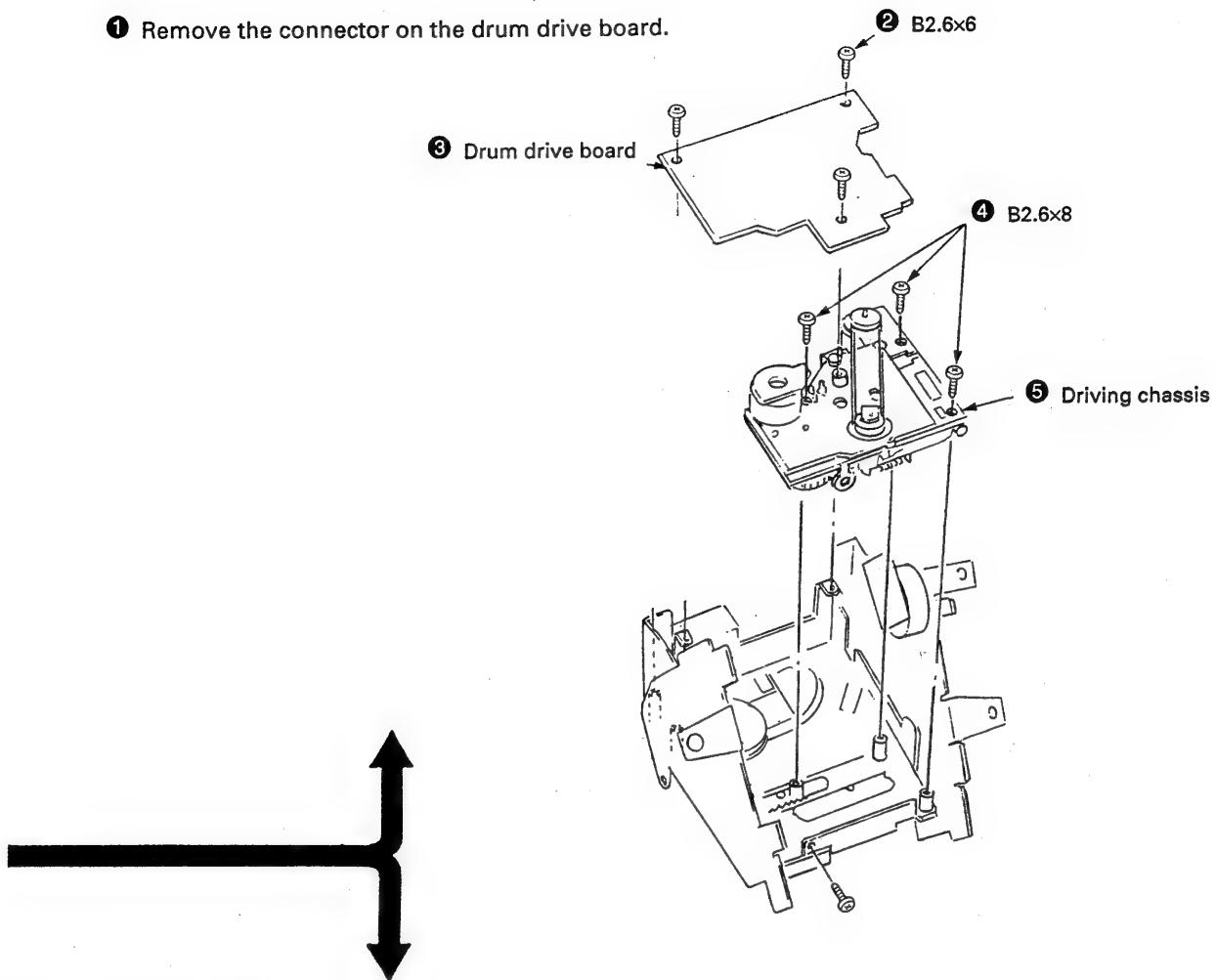
CASSETTE COMPARTMENT MOTOR (M901), PULLEY, GEAR (CAM) AND SLIDER**DRUM**

- ① Remove the drum lead wires on rear side of the drum from the connector.

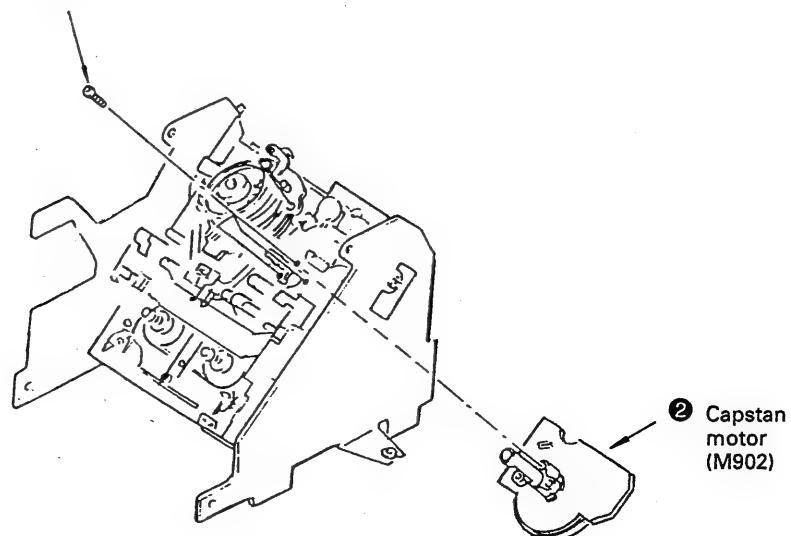


DRUM DRIVE BOARD, DRIVING CHASSIS

- ① Remove the connector on the drum drive board.

**CAPSTAN MOTOR (M902)**

- ① Precision screw M1.7x4



SECTION 3

ADJUSTMENTS

Notes When Making Adjustments

1. Adjustments should be performed in the order listed.

2. Use the following test tapes :

TY-7111 (8-909-812-00)	Level
TY-7252 (8-909-822-00)	Tracking
TY-7551 (8-909-814-00)	Functions
TY-30B (8-892-358-00)	Blank

Use the following torque meter:

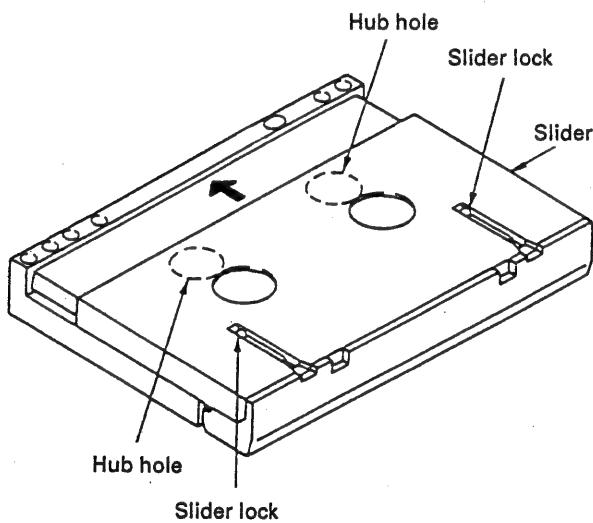
TW-7131 (8-909-708-71) FWD

3. Switches and controls should be set as follows unless otherwise specified.

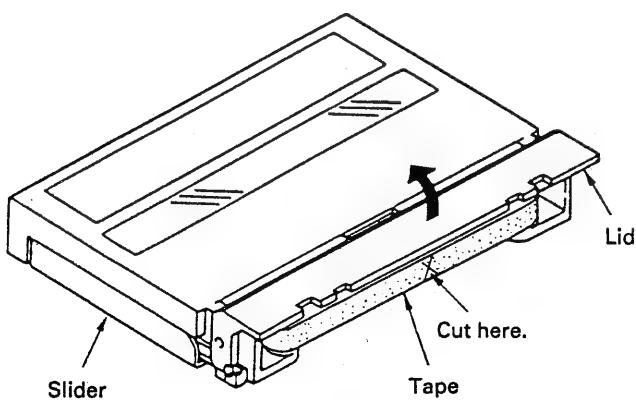
TIMER switch	: OFF
REC MODE switch	: LONG
INPUT switch	: OPTICAL
REC LEVEL control	: Min.
PHONES LEVEL control	: Min.

4. Creating an end sensor cassette

- (1) Press the tape slider lock and move the slider in the direction indicated by the arrow.



- (2) Open the lid and cut the tape.



- (3) Turn the hubs until the tape is completely inside the cassette (both T and S sides).

The end sensor cassette for end sensor adjustment is now ready for use.

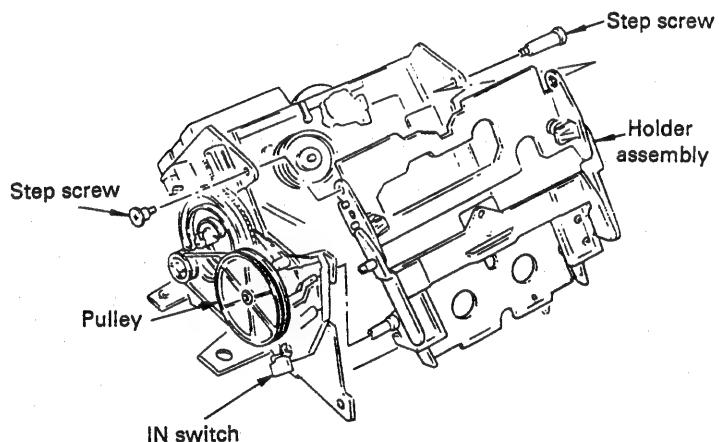
5. Cleaning of the Revolving Drum

- (1) Fold a chamois (2-034-697-00) or a knit cloth into 4 or more files, slightly impregnate it with a cleaning liquid (9-919-573-00), and softly touch the drum with it and manually rotate the drum slowly counterclockwise by 2 to 3 turns for cleaning.

- (2) At that time, be careful not to move the chamois vertically to the head tip. Otherwise, the head tip may probably be damaged.

6. Be careful not to move RV1 and RV2 on the RF AMP board in the mechanism assembly.**7. To adjust the tape path and guides, remove the holder assembly as shown in the diagram and use the DAT holder jig (J-8000-002-A). This will make it easier to perform adjustments.**

- First turning the pulley counterclockwise to put it in loading out status will make removal and reattachment of the holder assembly easier.
- To perform adjustments, turn the pulley clockwise to put it in loading in status, load the cassette tape and set the IN switch to the ON position.

**8. Test mode**

The test mode is effected by shorting TP (XTEST MAIN, XTEST SERVO and XTEST DISP) on the main board and the control switch board and GND.

(1) Test mode (main + servo)

Turn OFF the power switch, connect XTEST MAIN and XTEST SERVO on the main board to GND and perform the following adjustments.

- Tape path fine adjustment
- DPG adjustment
- ATF pilot (GCA) checking
- End sensor checking
- FWD torque checking
- FWD back tension checking and adjustment

(2) Test mode (display)

You can check the following FL display tube and the panel switch by turning OFF the power switch, disconnecting CN932 on the power board, removing flexible board CN752 on the control switch board, connecting XTEST DISP to GND, connecting CN932 again and then turning ON the power switch.

Each grid of the FL display tube sequentially lights up while all tubes being lighted up finally.



Level meters go out one after one.



Press any of the remote controller for DAT in this state. Thus, all level meters go out. (It may sometimes occur that one or two meters remain lighting up according to switch setting at that time.)



Everytime a switch on the panel is pressed, display tubes light up sequentially one after one. With all keys once pressed, all level meters go out.

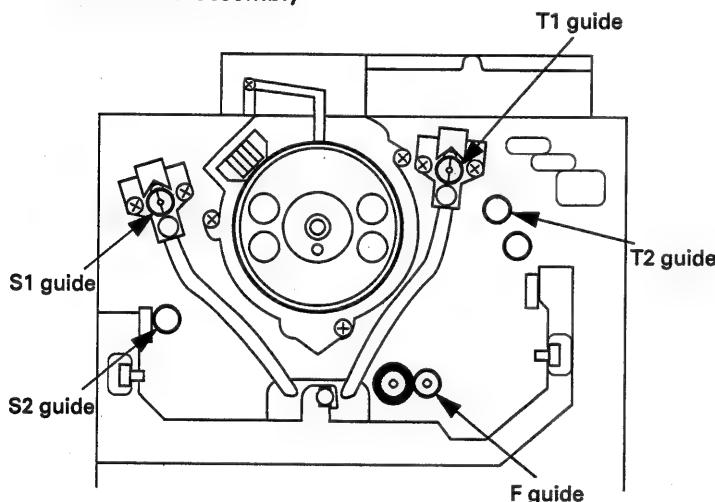
To reset the test mode, disconnect the wire shorting XTEST and GND. After completion of adjusting, be sure to reset the test mode.

9. Check the following items for correct tape speed, after completion of adjusting.

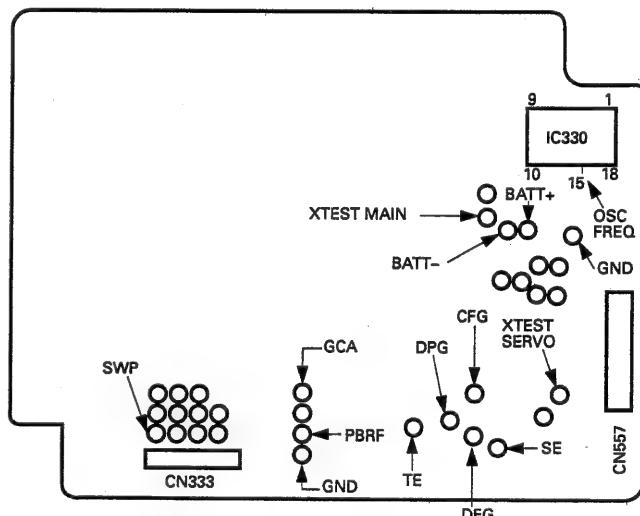
- (1) Set the REC MODE switch to STANDARD and check for normal recording and playback. (x 1)
- (2) Set the REC MODE switch to LONG and check for normal recording and playback. (x 0.5)
- (3) With QUE (► + ►►) or REVIEW (► + ◀◀), check that qurr, qurr sound is heard. (x 3, x 8)
- (4) Check that correct time is displayed after FF(►►) or REV(◀◀). (x 16)
- (5) Check that SEARCH (►►, ◀◀) is normal.

Adjust Parts Location

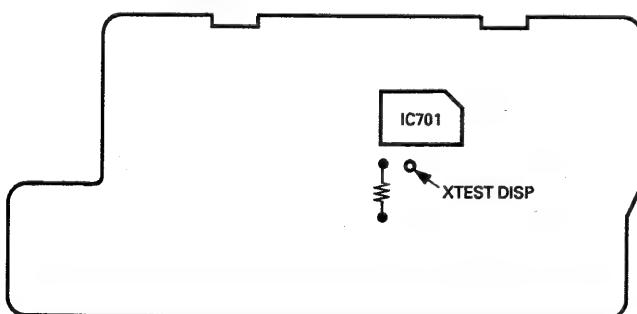
— Mechanism assembly —



— Main board —



— Control SW board —



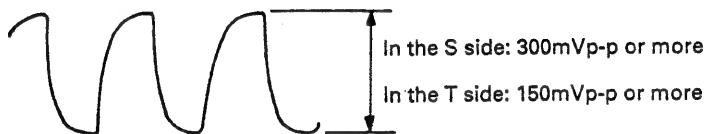
3-1. ELECTRICAL ADJUSTMENTS

End Sensor Check

Perform the following adjustment when the holder has been removed or part of the mechanism deck section replaced.

Check Procedure:

1. Connect an oscilloscope to the test land SE (in the S side) and TE (in the T side) of the main board.
2. Actuate the test mode (main · servo), mount an end sensor cassette and effect the STOP (■) mode.
3. Check that p-p values of waveform of the oscilloscope satisfy the following.



FWD Torque Check

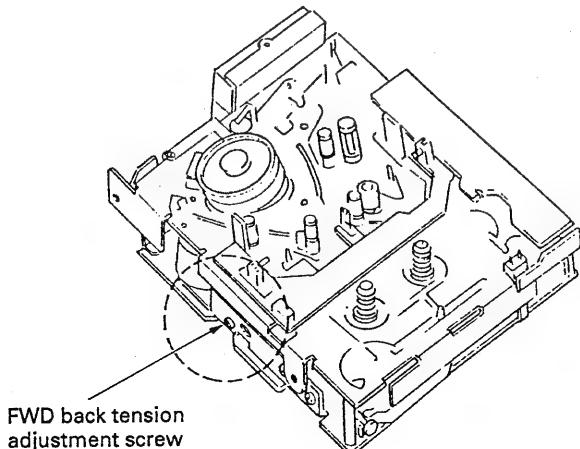
Check Procedure:

1. Put the set into the test mode (main · servo) and load the FWD torque meter TW-7131 (8-909-708-71).
2. Put the set into the PLAY (►) mode.
3. Confirm that the FWD torque value (take-up side rewinding torque) is between 10 – 20 g·cm (0.14 – 0.28 oz·inch).
4. Confirm that the value indicated by the torque meter is maintained for one full cycle.

FWD Back Tension Check and Adjustment

Check procedure:

1. Put the set into the test mode (main · servo) and load the FWD torque meter TW-7131 (8-909-708-71)
2. Put the set into the PLAY (►) mode.
3. Confirm that the back tension (supply side) is between 5 – 6 g·cm (0.07 – 0.09 oz·inch).
- If this is not satisfied, adjust back tension by rotating the FWD back tension adjustment screw equipped on the side surface of the mechanical deck. After completion of adjusting, be sure to apply screw lock.
4. Confirm that value indicated by the torque meter is maintained for one full cycle.



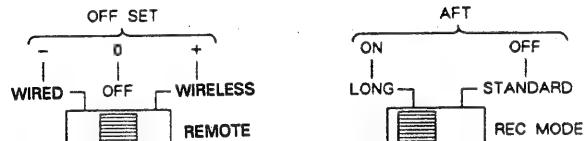
To tighten (clockwise) — back tension becomes larger.
To loosen (counterclockwise) — back tension becomes smaller.

Tape Path Fine Adjustments (× 1.5 FWD Mode)

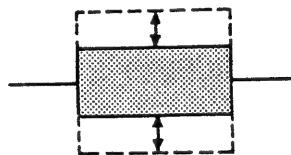
Perform the following adjustment when the drum has been replaced.

Adjustment Procedure :

1. Connect an oscilloscope CH-1 to TP (PBRF) and CH-2 to TP (SWP) on the main board.
2. Put the set into the test mode (main · servo) and load test tape TY-7252 (8-909-822-00).
3. Press the AMS (▶▶) key.
Each part of switches on Test Mode.

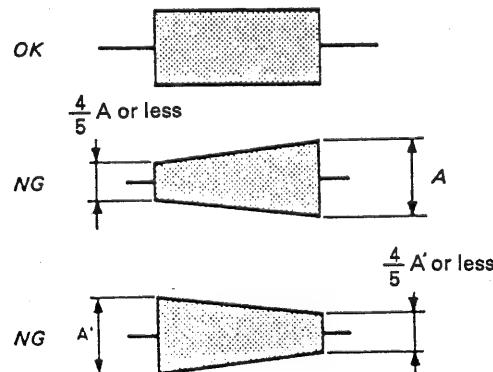


4. With the REC MODE switch set to STANDARD (AFT: OFF) and the REMOTE switch set to WIRELESS or WIRED (OFFSET: + or -), fine adjust the S1 and T1 guides so that the oscilloscope RF signal waveform remains the same when high-low is repeated.



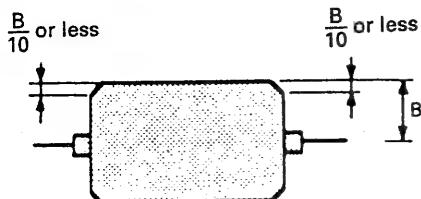
* Finish the adjustment by screwing in.

5. Check the RF signal waveform with the REC MODE switch set to LONG (AFT: ON) and the REMOTE switch set to WIRELESS or WIRED (OFFSET: + or -).



6. Check the RF signal waveform with the REC MODE switch set to LONG (AFT: ON) and the REMOTE switch set to OFF (OFFSET: 0).
 - (1) Confirm that the RF signal waveform peak value (B) is 60 mV or more.

- (2) Confirm that the undershoot level of the RF signal waveform's flat portion is within 10%.



7. When the measured values are not within the above tolerances, repeat items 3 – 6 above.

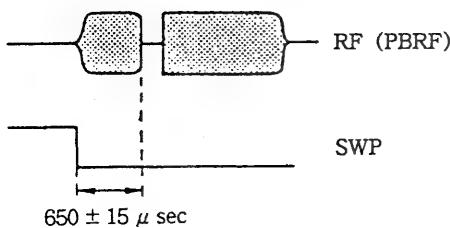
Adjustment Point: mechanism assembly

DPG Adjustment

Perform the following adjustment without fail when the drum has been replaced.

Adjustment Procedure:

1. Connect oscilloscope CH-1 to TP (PBRF) and CH-2 to TP (SWP) on the main board. (Use CH-2 as the trigger. When the CH-2 signal is inverted, the trailing edge can be used for synchronization.)
2. Put the set into the test mode (main - servo) and load test tape TY-7252 (8-909-822-00).
3. Set the REC MODE switch to LONG (ATF: ON) and the REMOTE switch to OFF (OFFSET: 0).
4. Press the AMS (►►) key.
5. Press the ◀◀ and ►► keys as appropriate so that the gap between the oscilloscope SWP and RF signals becomes $650 \pm 15 \mu\text{sec}$. (Hold the ◀◀ and ►► keys down for more than 1 second to perform rough adjustment. Hold them down for approximately 0.2 seconds for fine adjustment.)



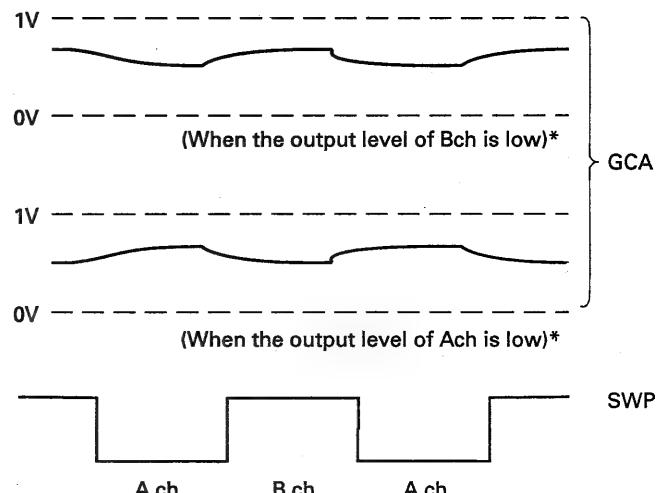
ATF Pilot (GCA) Check

Perform this adjustment after cleaning the heads with a cleaning cassette.

Check Procedure:

1. Connect oscilloscope CH-1 to TP (GCA: Gain Control Amp.) and CH-2 to TP (SWP) on the main board. (When the CH-2 signal is inverted, the trailing edge can be used for synchronization.)
2. Put the set into the test mode (main - servo) and load test tape TY-7111 (8-909-812-00).

3. Actuate the PLAY (►) mode and check that the GCA waveform on the oscilloscope is as follows.



* Slightly changes depending on the state of the head. NG if the GCA waveform is 1V or more or equal to the GND level.

3-2. CHECKS FOR DATE FUNCTION

Clock IC Back-up Check

- When there is the short-circuit position on the pattern around the lithium battery (BAT301) or the clock IC (IC330) or disconnecting CN398 on removing the front panel assembly the clock is reset. (In spite of pressing PRESET button, the data indication becomes “—Y—M—D” “—H—M—S”) At this time, check the back-up function by the procedures given below.

- (1) Connect DC voltmeter to TP (BATT+) and TP (BATT-) on the main board.
- (2) When the power is off, the voltage value of the item (1) should be less than +30 mV.
(When the voltage value becomes +30 mV or more, Check around IC330 or replace IC330.)
- (3) When the power is on, the voltage value of the item (1) should be less than 0 mV (– (minus) indication).
(When the voltage value becomes + (plus) indication, Check around IC321 or replace IC321.)
- (4) When the above voltage values are normal, set the preset date and time (year, month, day, day of the week, hour, minute, second) according to the instruction manual. (See page 12 for clock setting.)
- (5) After setting the time on the item (4), turn power off and turn power on several seconds later, and check the clock works normally.

Back-up Battery Replacement

The life of the back-up battery under normal use (normal temperature, normal humidity) is approximately ten years or more. (On the instruction manual, described “approximately five years”.)

Be careful about the following points on the battery replacement.

- Repair the cause of the battery wastage by performing mentioned above “Clock IC Back-up Check”.
- The open-circuit voltage of the replaced battery is 3.0 V or more as the new one, and when it is 2.0 V or less, it is completely consumed, replace it with new one.
- After the battery replacement, perform “Clock IC Back-up Check” again and set the time. (See page 12 for clock setting.)

Clock Frequency Check

Check Procedure:

1. Connect a frequency counter to pin ⑤ of IC330 and GND on the main board.
2. Turn power on and confirm that the reading on the frequency counter is 2048.00 ± 0.02 Hz. (at normal temperature)
3. Perform “Clock IC Back-up Check” described above.

Clock Frequency Adjustment

Precautions:

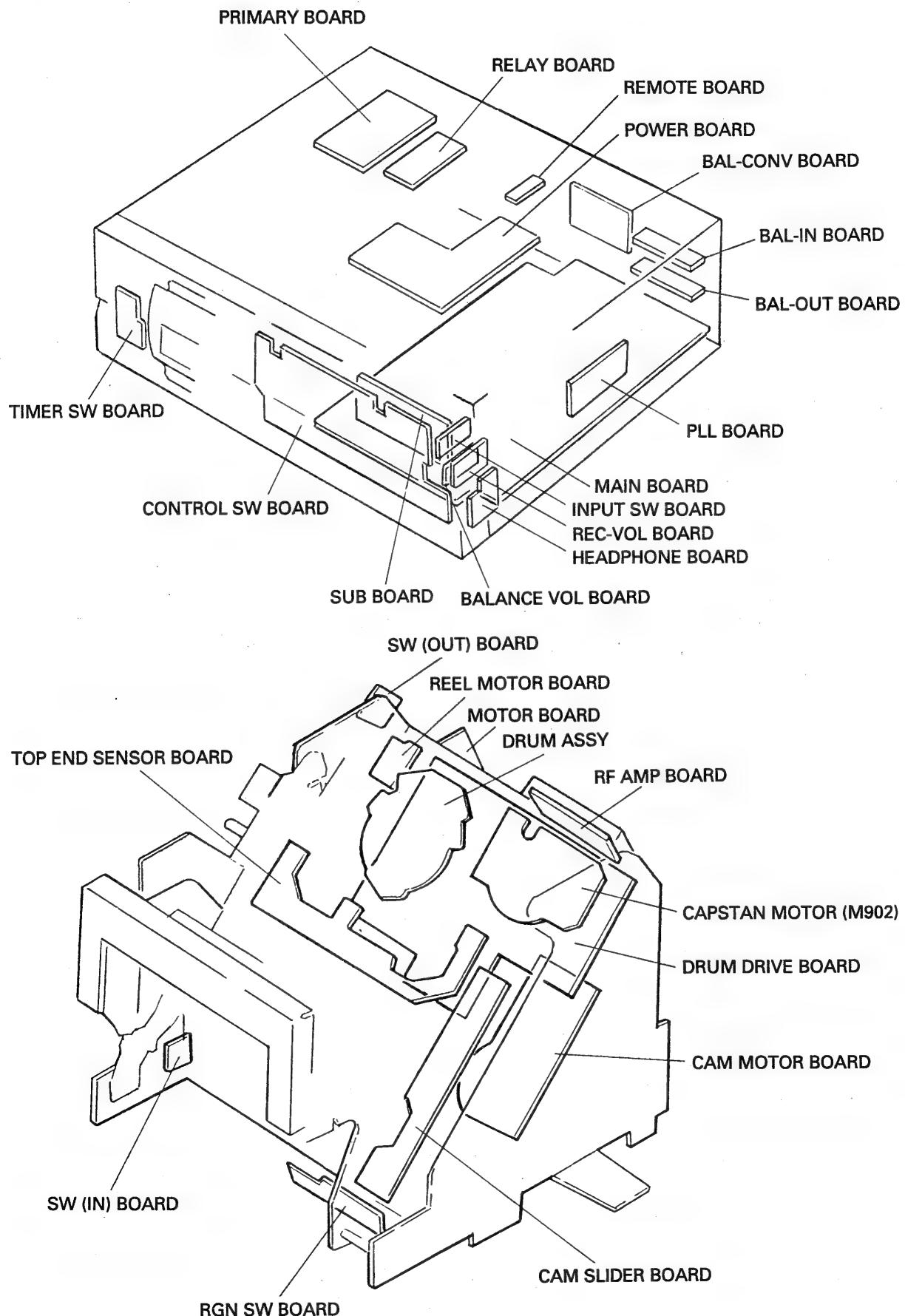
- Only when the adjustment of clock frequency is required (for instance, after the replacement of the X304), adjust it according to the following procedures:
- Be sure to use a frequency counter with a minimum indication accuracy of 6 digits.
- This adjustment is not needed during normal repair work. Never rotate the trimmer capacitor CT301.

Adjustment Procedure:

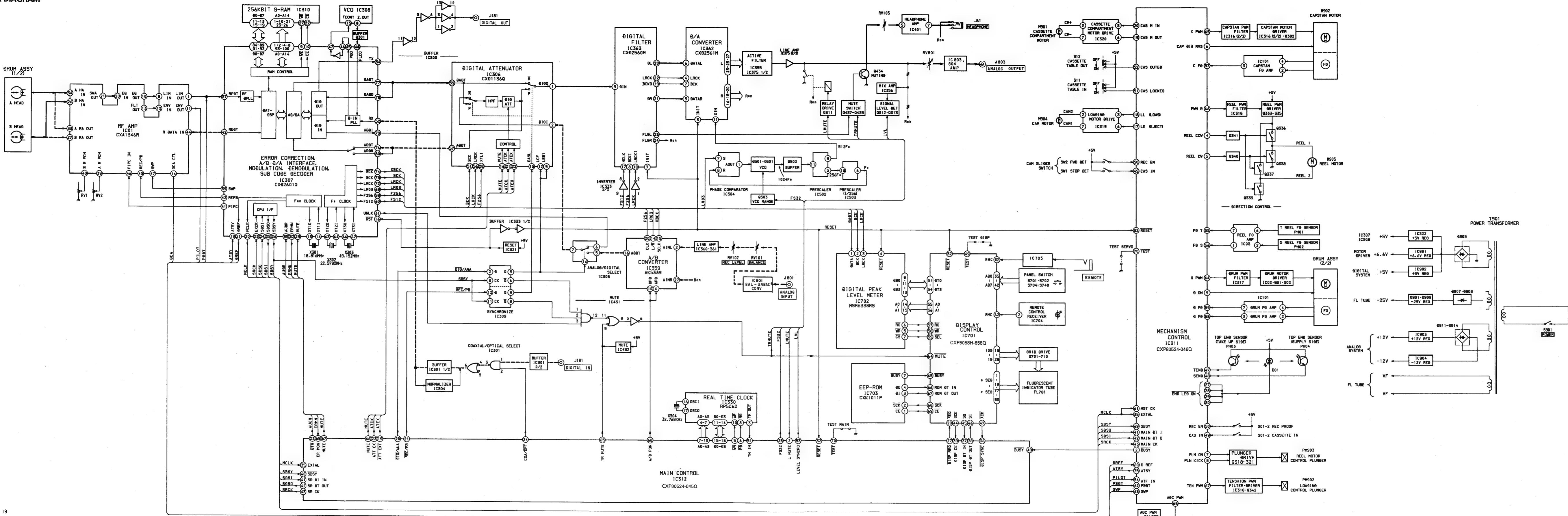
- (1) Connect a frequency counter across the test land “OSC FREQ” and GND in the main board.
- (2) Turn power on and adjust the trimmer capacitor CT301 so that the frequency satisfies the following specifications:
Specifications : 2048.00 ± 0.01 Hz (at normal temperature)
 $(2047.99 — 2048.01\text{Hz})$
- (3) Perform “Clock IC Back-up Check” described above.

SECTION 4 DIAGRAMS

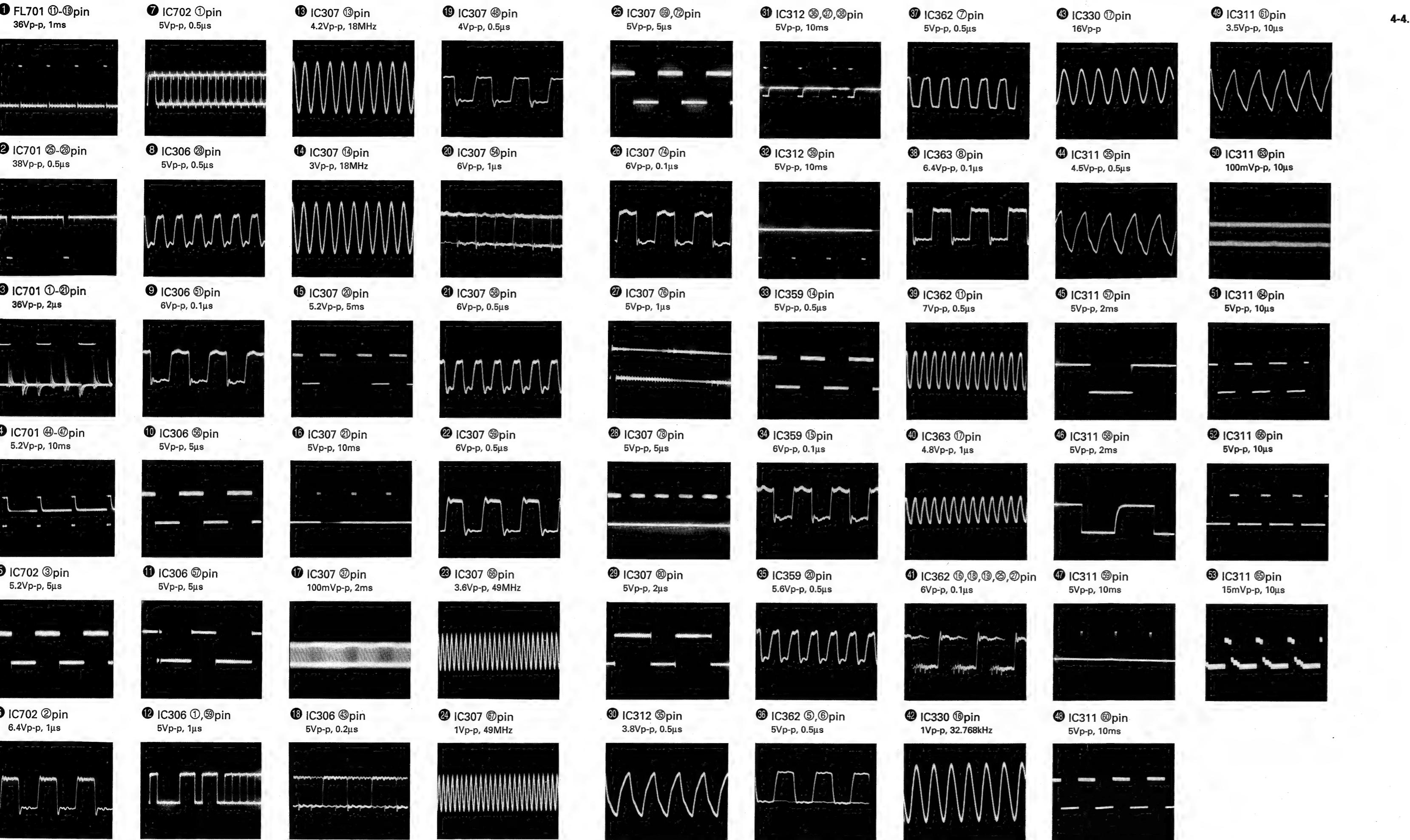
4-1. CIRCUIT BOARDS LOCATION



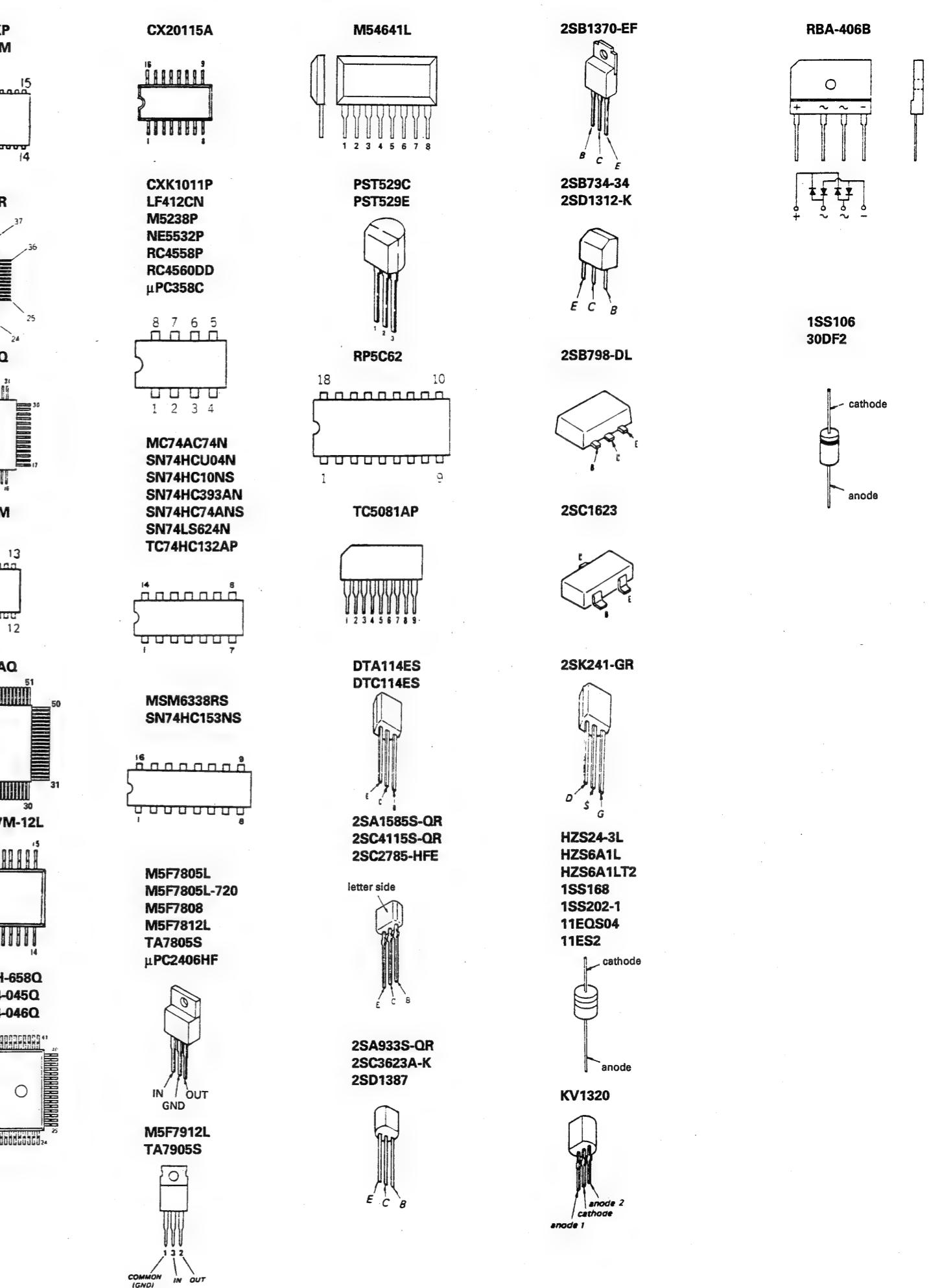
4-2. BLOCK DIAGRAM



4-3. WAVEFORMS



4-4. SEMICONDUCTOR LEAD LAYOUTS



4-5. PRINTED WIRING BOARDS

- MD/POWER SUPPLY/DISPLAY SECTION -

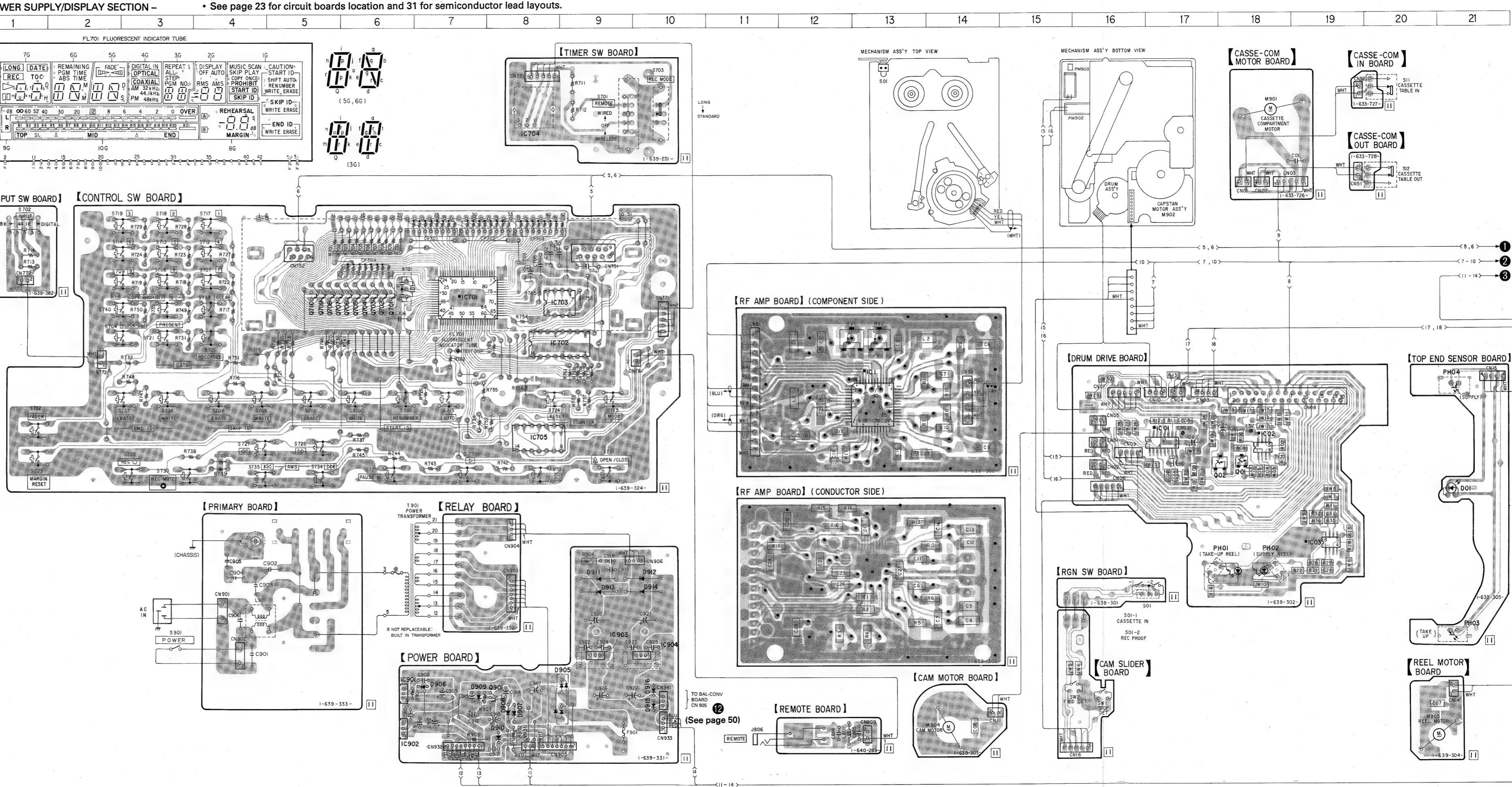
• See page 23 for circuit boards location and 31 for semiconductor lead layouts.

● SEMICONDUCTOR LOCATION

Ref. No.	LOCATION
D01	G - 21
D905	J - 9
D906	I - 7
D907	J - 8
D908	J - 8
D909	J - 7
D910	J - 8
D911	H - 9
D912	H - 10
D913	H - 9
D914	H - 10
D915	J - 10
D916	J - 10
IC1	F - 13
IC01	F - 17
IC02	F - 18
IC03	G - 19
IC701	D - 7
IC702	E - 8
IC703	D - 8
IC704	B - 8
IC901	J - 6
IC902	J - 6
IC903	I - 9
IC904	I - 10
PH01	H - 17
PH02	H - 18
PH03	I - 21
PH04	E - 21
Q01	F - 18
Q02	F - 18
Q701	D - 6
Q702	D - 6
Q703	D - 6
Q704	D - 6
Q705	D - 6
Q706	D - 6
Q707	D - 5
Q708	D - 5
Q709	D - 5
Q710	D - 5
Q901	J - 8

Notes on printed wiring board:

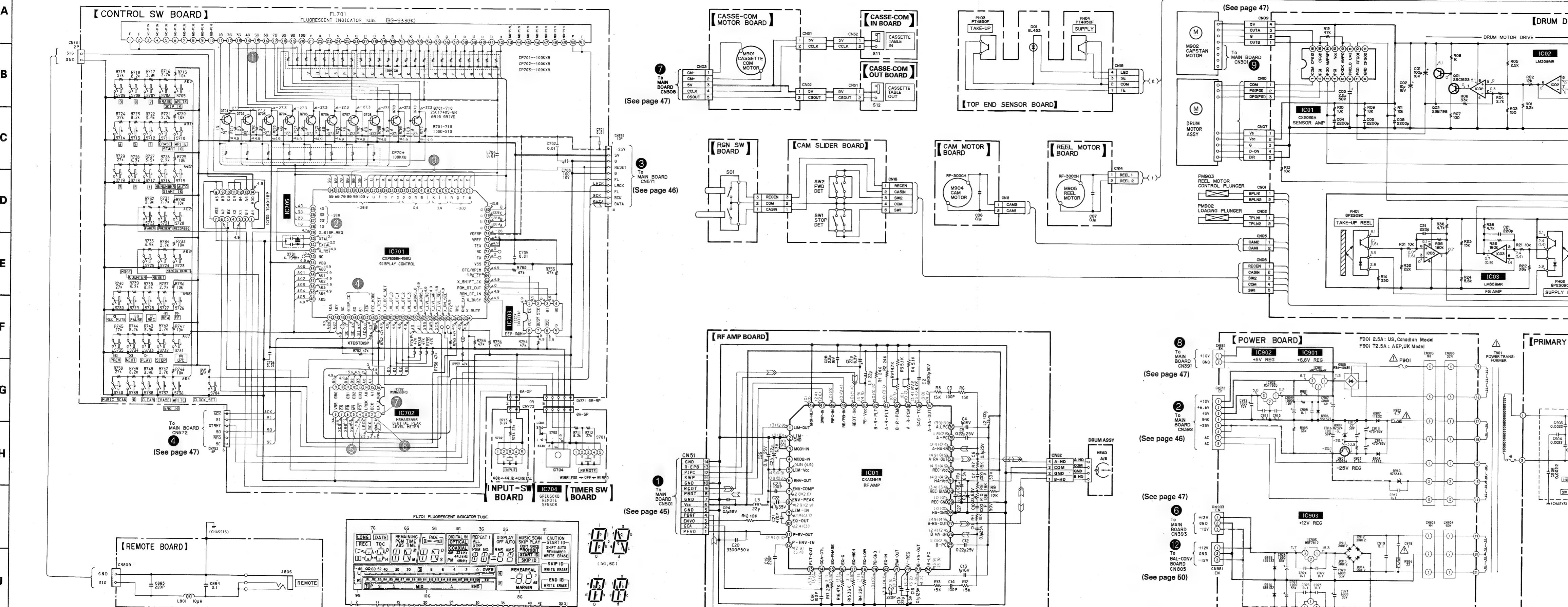
- — : indicated a lead wire mounted on the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.



4-6. SCHEMATIC DIAGRAM - MD/POWER SUPPLY/DISPLAY SECTION -

• See page 29 for waveforms, 53 for IC block diagrams and 57 for pin functions.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27



Notes on schematic diagram:

- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4W or less unless otherwise noted.
- Δ : internal component.
- WV : Fuse resistor

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.
Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- \circ : B + Line.
- $\circ \circ$: B - Line.
- Voltage are dc with respect to ground under no-signal (STOP) conditions.
- no mark : Stop
- () : PLAY
- < > : REC
- Voltages are taken with a VOM (input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path
- \swarrow : PB
- \searrow : REC

4-7. PRINTED WIRING BOARDS

● SEMICONDUCTOR LOCATION

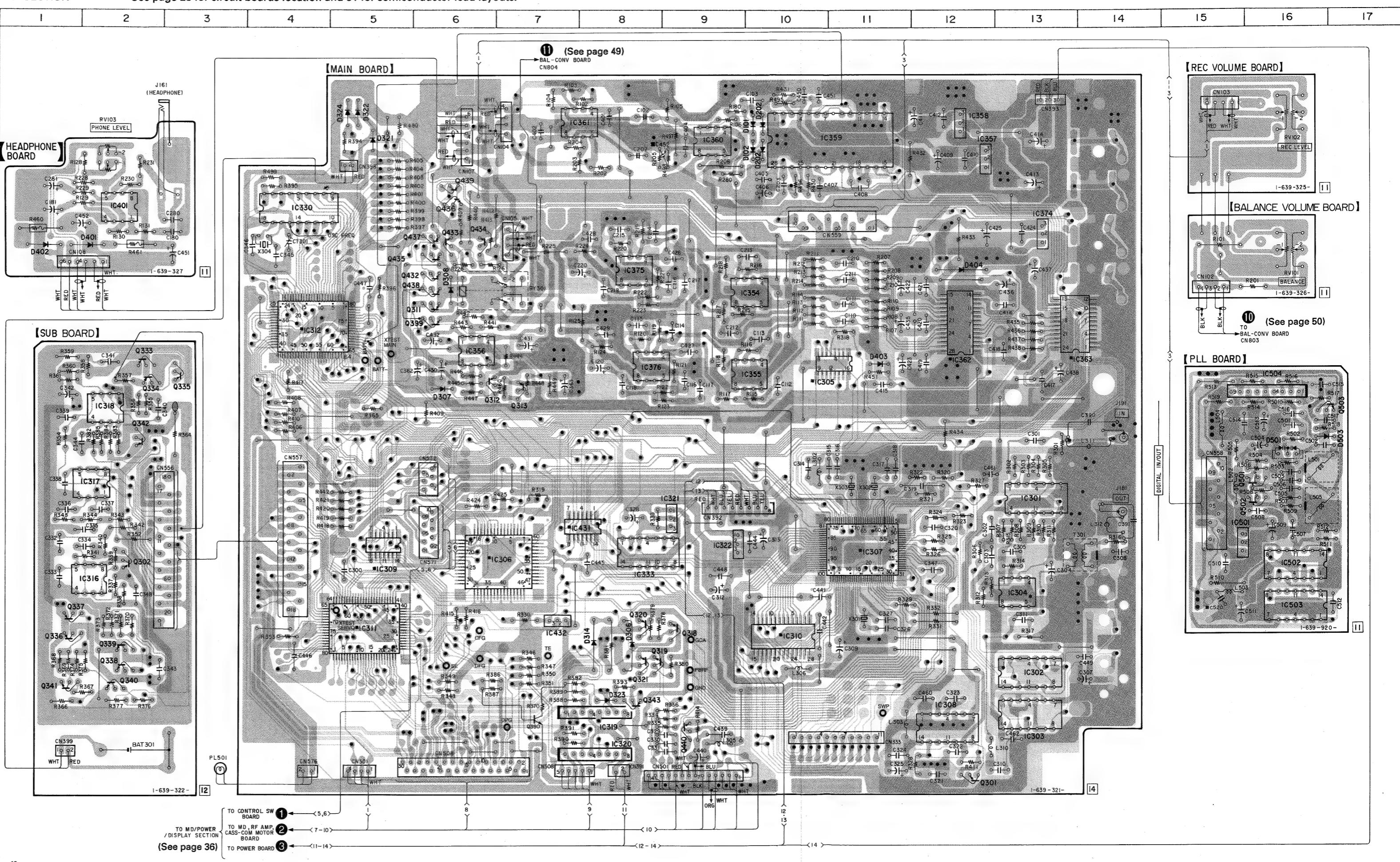
Ref. No.	LOCATION	Ref. No.	LOCATION
D101	A - 7	IC361	B - 7
D102	A - 7	IC362	D - 12
D201	B - 7	IC363	D - 13
D202	B - 7	IC374	C - 13
D306	H - 8	IC375	C - 8
D307	E - 6	IC376	E - 8
D308	D - 6	IC401	C - 2
D314	H - 8	IC431	F - 8
D321	B - 5	IC432	H - 7
D322	B - 5	IC501	G - 15
D323	I - 8	IC502	G - 16
D324	B - 5	IC503	G - 16
D401	C - 2	IC504	E - 16
D402	C - 1		
D403	E - 11	Q301	I - 12
D404	C - 12	Q302	G - 2
D501	F - 16	Q311	D - 6
D503	E - 16	Q312	E - 6
		Q313	E - 7
IC301	F - 13	Q318	H - 7
IC302	H - 13	Q319	H - 8
IC303	I - 13	Q320	H - 8
IC304	G - 13	Q321	H - 8
IC305	E - 11	Q333	D - 2
IC306	G - 6	Q334	E - 2
IC307	G - 11	Q335	E - 3
IC308	I - 12	Q336	H - 1
IC309	G - 5	Q337	H - 1
IC310	H - 10	Q338	H - 2
IC311	H - 5	Q339	H - 2
IC312	D - 4	Q340	H - 2
IC316	G - 2	Q341	H - 1
IC317	F - 2	Q342	E - 2
IC318	E - 2	Q343	I - 8
IC319	I - 8	Q399	D - 6
IC320	I - 8	Q432	C - 6
IC321	F - 9	Q433	C - 6
IC322	G - 9	Q434	C - 6
IC330	C - 4	Q435	C - 6
IC331	G - 14	Q436	C - 6
IC332	H - 14	Q437	C - 6
IC333	G - 8	Q438	D - 6
IC354	D - 10	Q439	B - 6
IC355	E - 10	Q440	I - 9
IC356	D - 6	Q501	F - 16
IC357	B - 12	Q502	F - 16
IC358	B - 12	Q503	E - 16
IC359	B - 10		
IC360	B - 9		

Notes on printed wiring board:

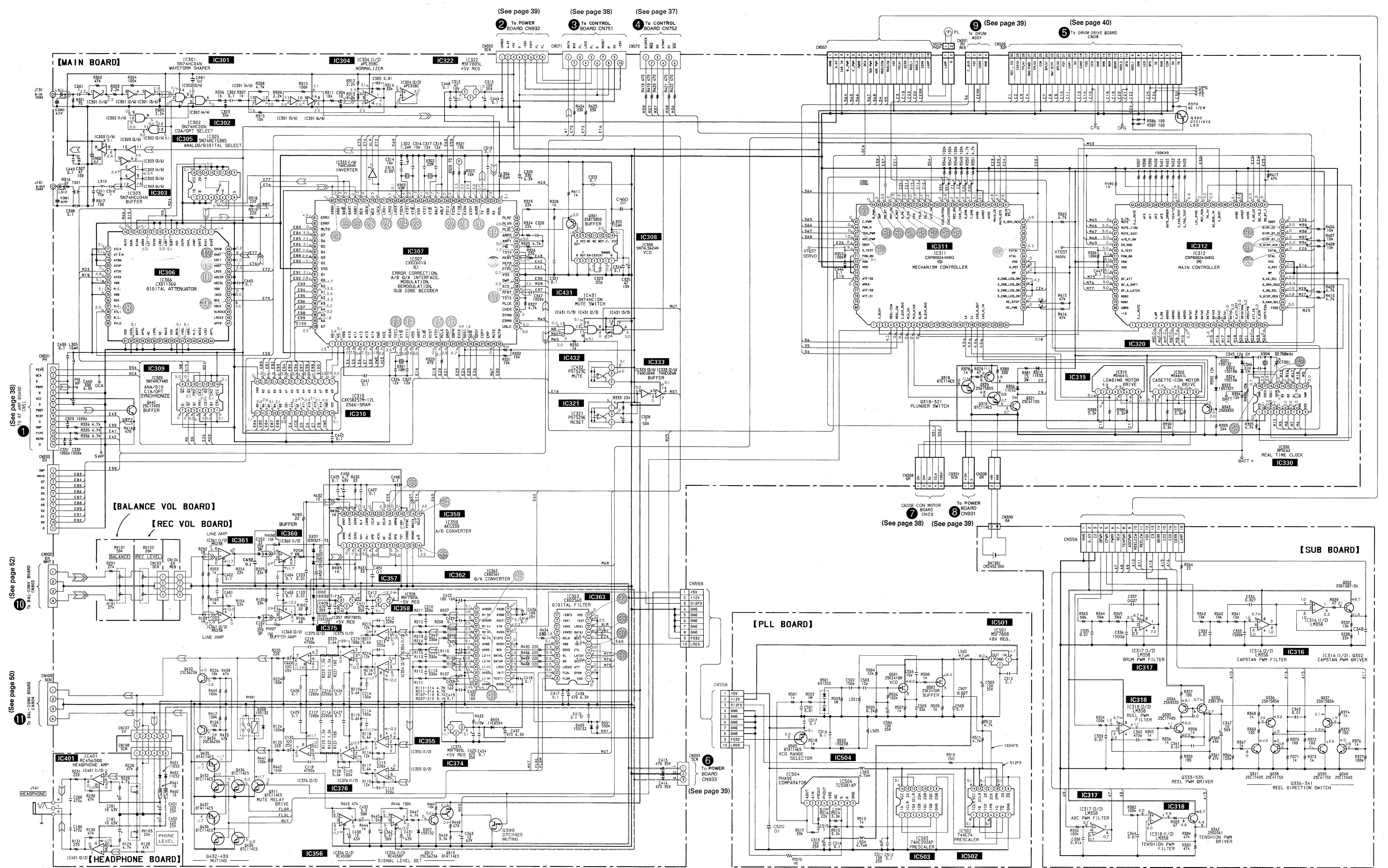
- : indicated a lead wire mounted on the component side.
- : indicated a lead wire mounted on the conductor side.
- : parts mounted on the conductor side.
- : indicates side identified with part number.
- : Through hole.
- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

- MAIN SECTION -

• See page 23 for circuit boards location and 31 for semiconductor lead layouts.



A —
B —
C —
D —
E —
F —
G —
H —
I —
J —
K —
L —
M —
N —
O —



Notes on schematic diagram:

- All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$ 50VW or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4W or less unless otherwise noted.
- : B+ Line.
- - - : B- Line.
- : adjustment for repair.
- Voltage are dc with respect to ground under no-signal (STOP) conditions.
- no mark : Stop
- Voltages are taken with a VOM (input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.

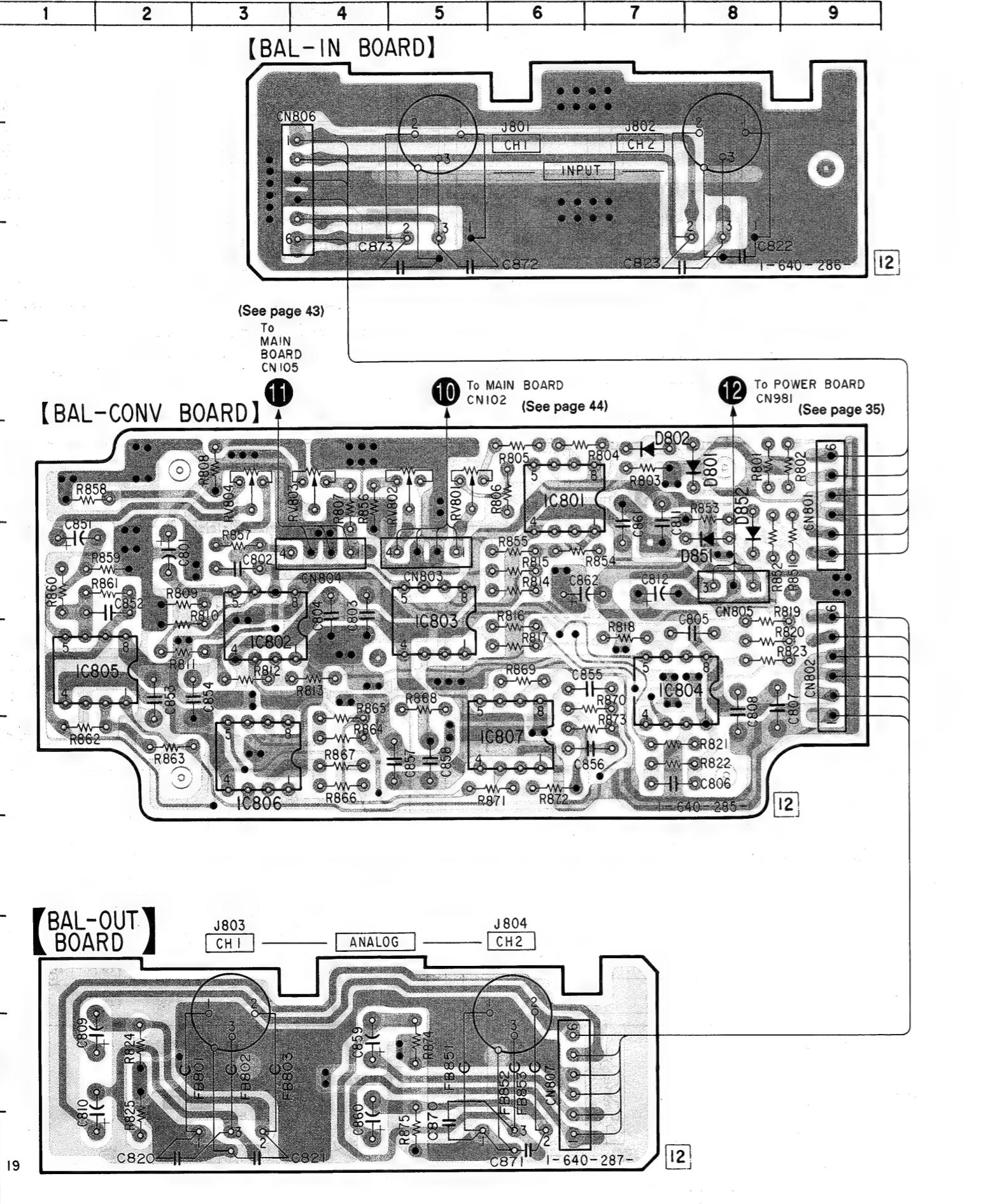
4-9. PRINTED WIRING BOARDS

• SEMICONDUCTOR LOCATION

Ref. No.	LOCATION
D801	E-7
D802	E-7
D851	F-7
D852	F-8
IC801	E-6
IC802	G-3
IC803	G-5
IC804	G-7
IC805	G-1
IC806	H-3
IC807	H-5

- BALANCE IN/OUT SECTION -

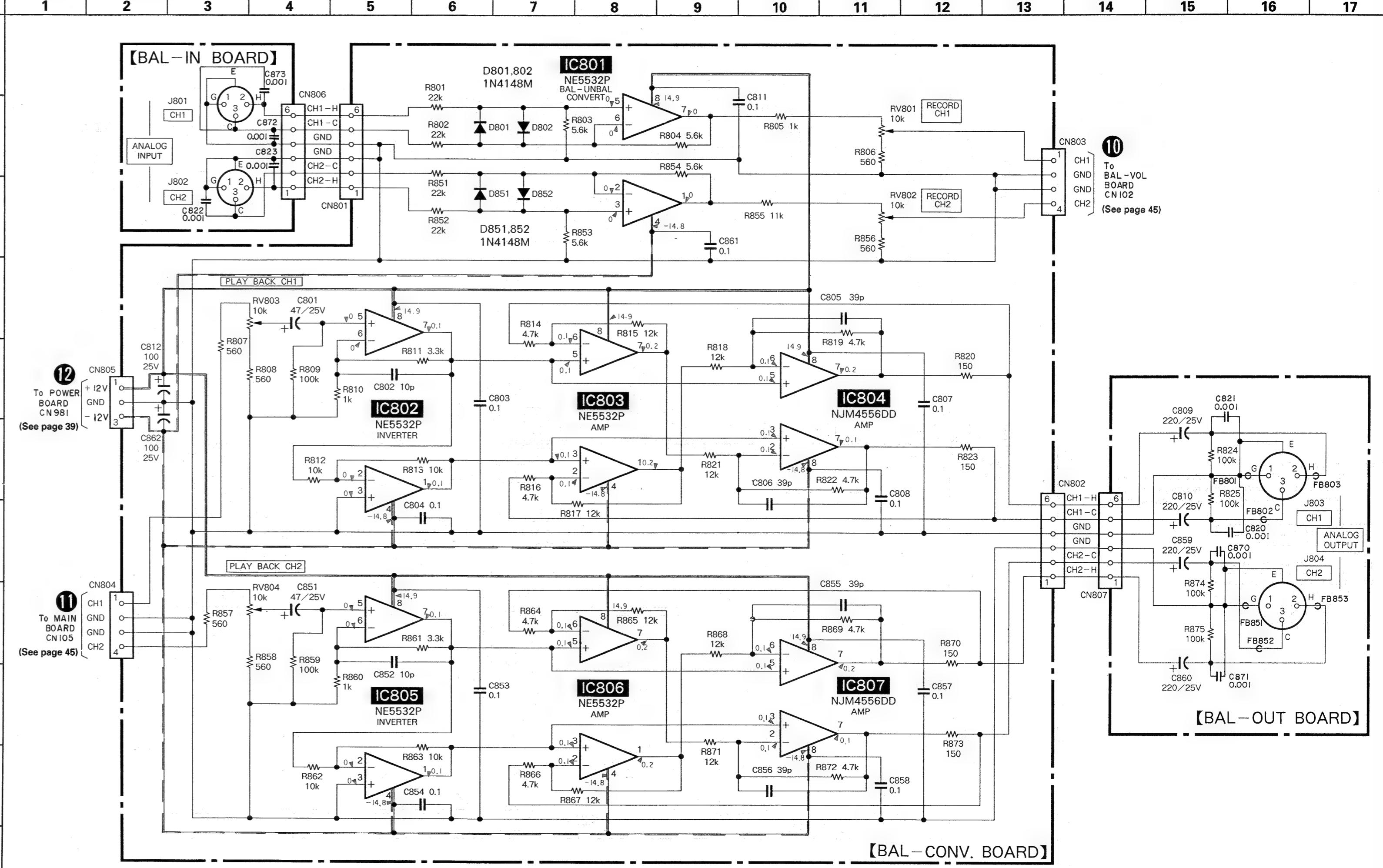
• See page 23 for circuit boards location and 31 for semiconductor lead layouts.



Notes on printed wiring board:

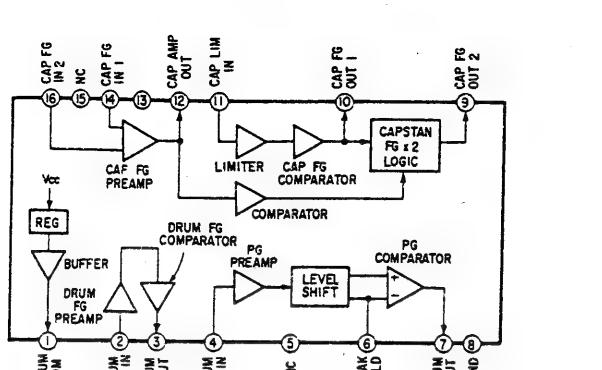
- : indicated a lead wire mounted on the component side.
- : Through hole.
- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

4-10. SCHEMATIC DIAGRAM - BALANCE IN/OUT SECTION -

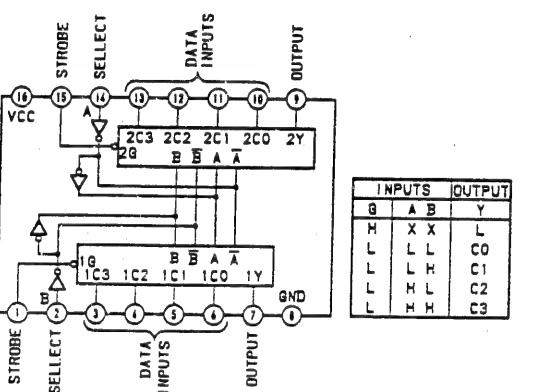


-11. IC BLOCK DIAGRAMS

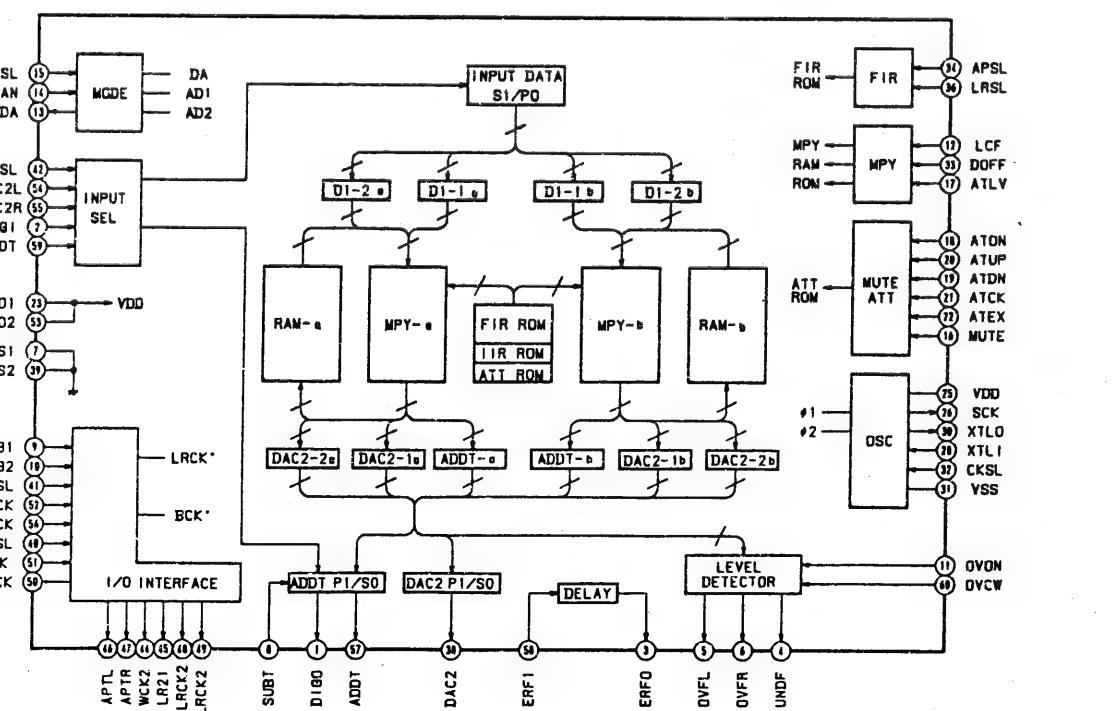
IC01 CX20115A



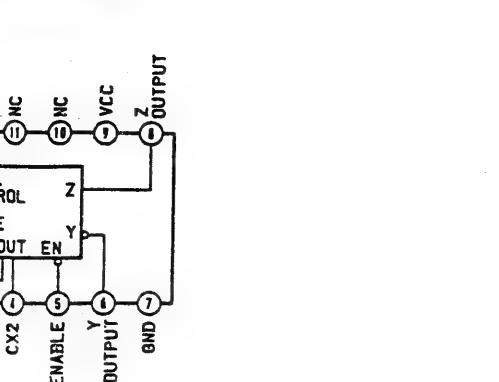
IC305 SN74HC153NS



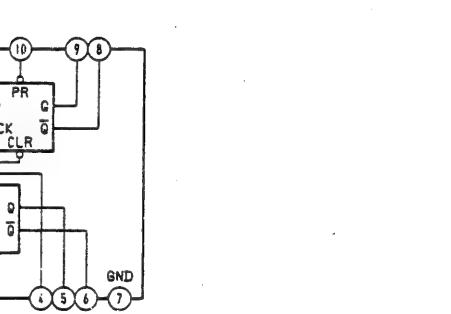
IC306 CXD1136Q



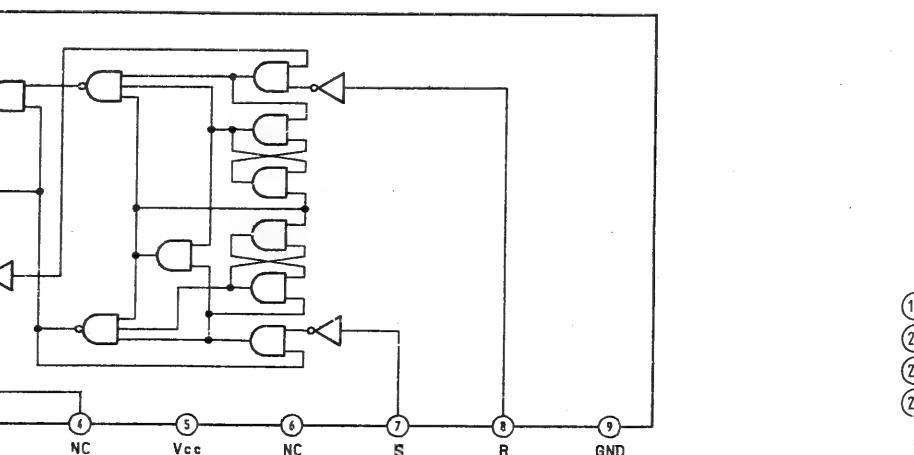
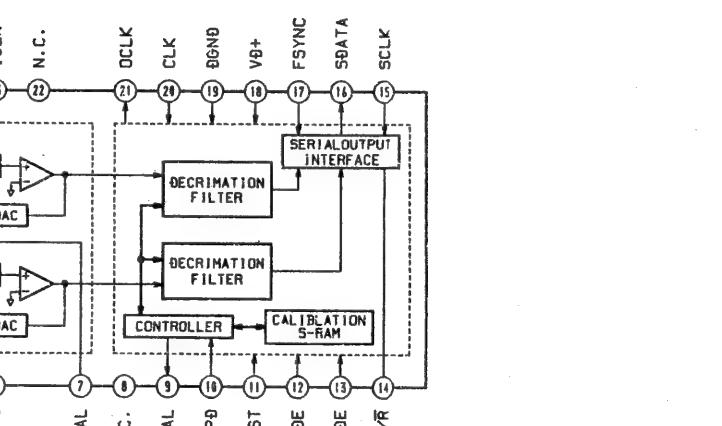
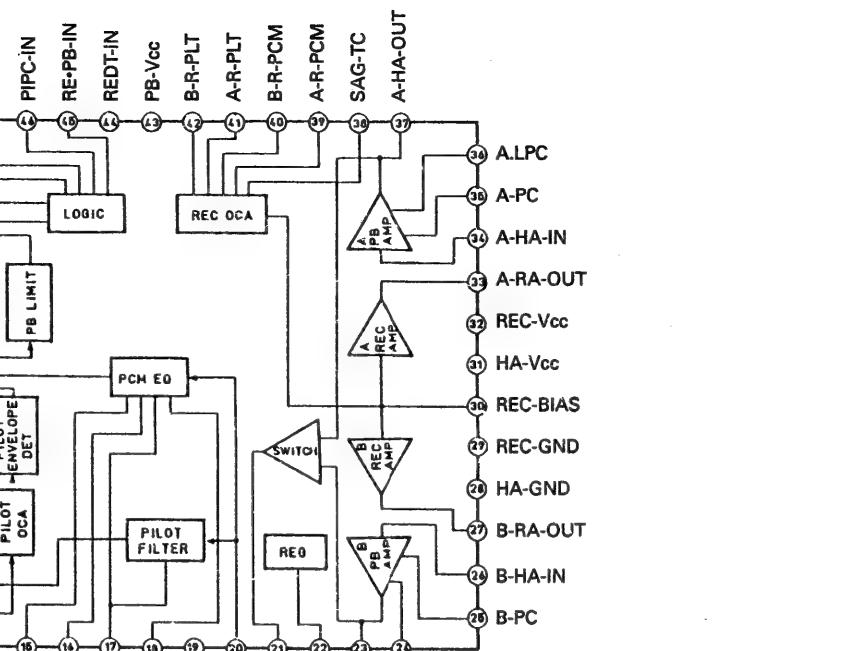
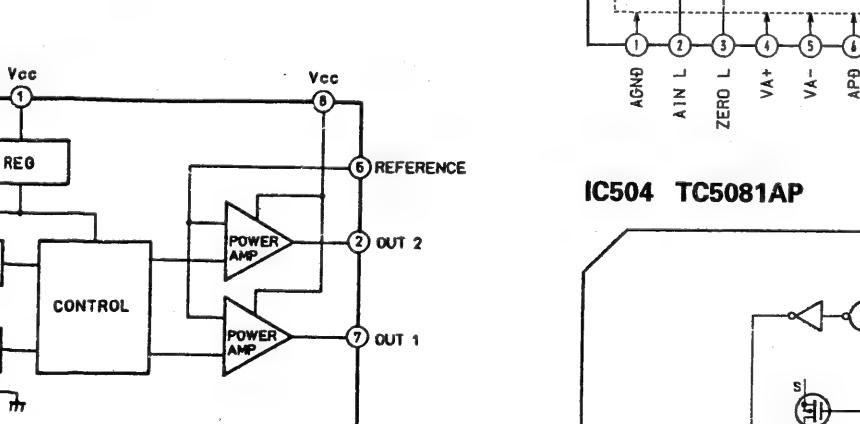
'4LS624N



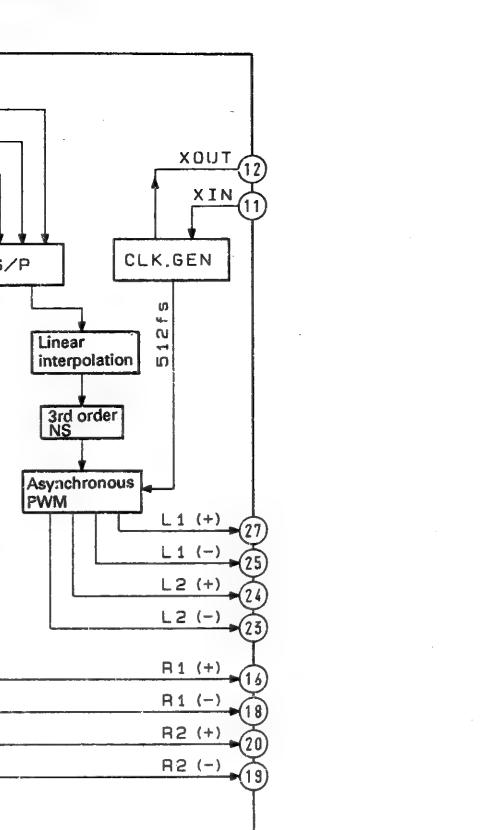
4HC74NS



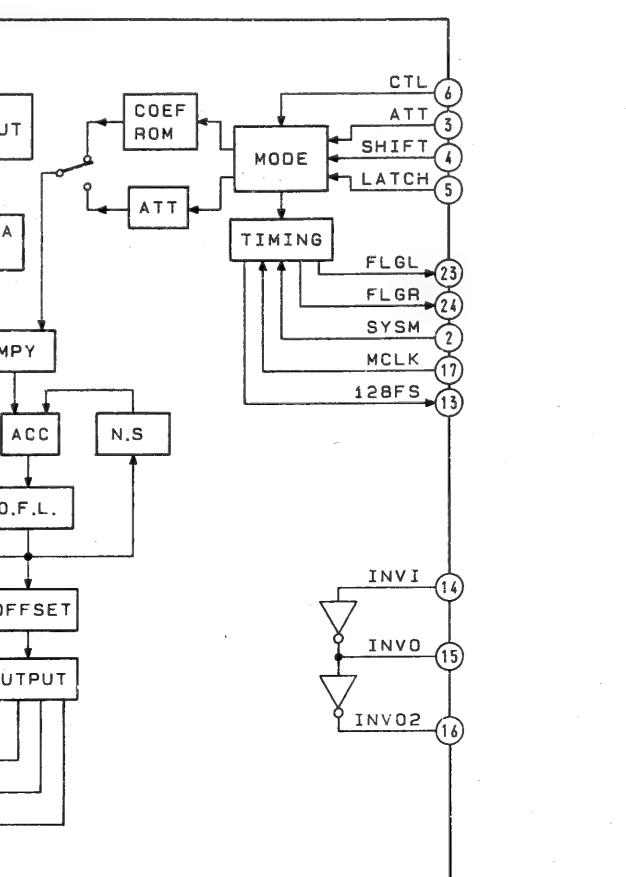
M54641L



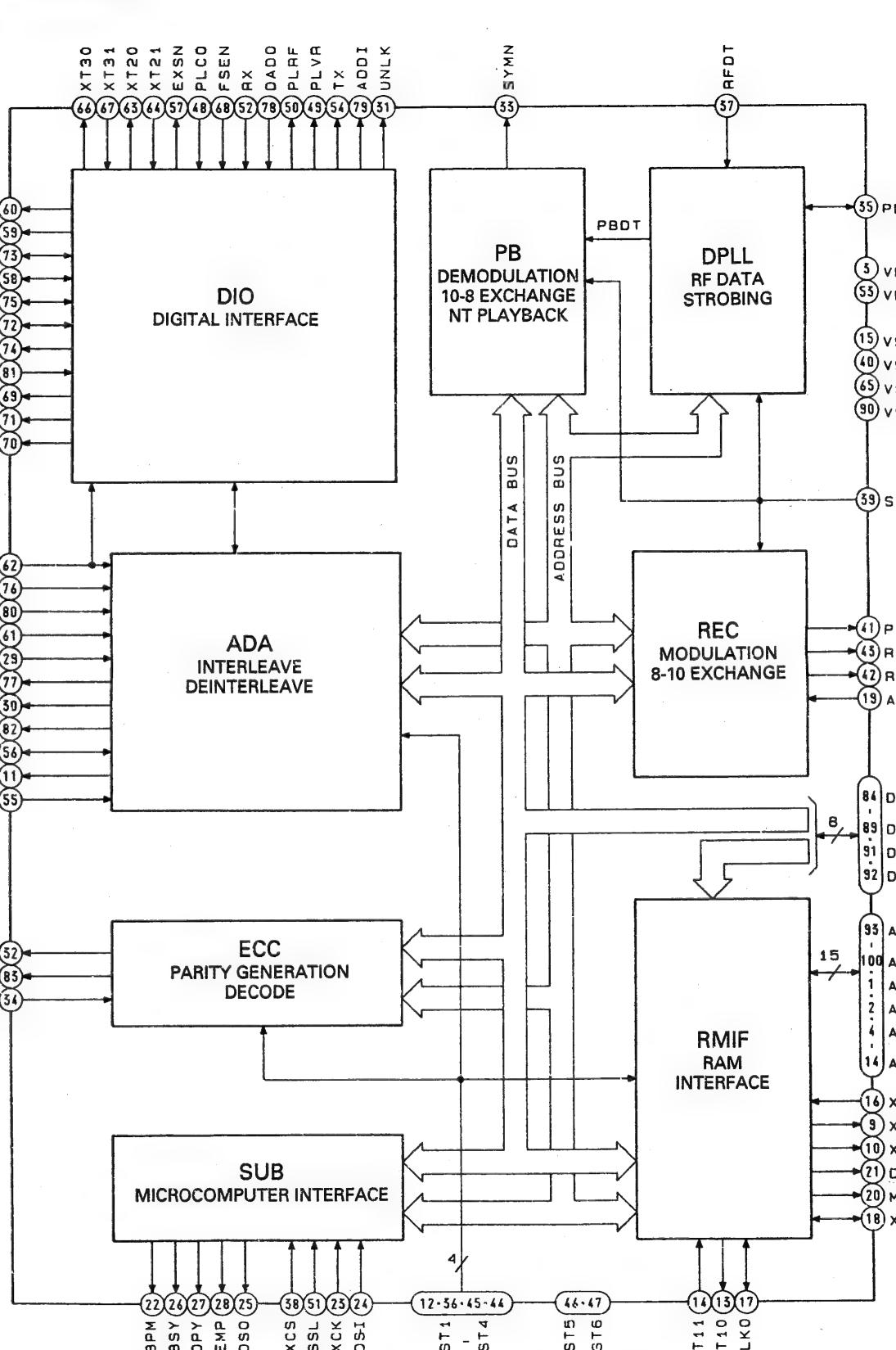
561M



560M



CXD2601AQ



4-12. PIN FUNCTIONS

IC306 Digital Attenuator (CXD1136Q)

The captioned attenuator is used with the equipment as a digital attenuator in fade IN and fade OUT.

Pin No.	Pin Name	I/O	Description
1	DIGO	O	Serial data output synchronized with BCK (complement of 2)
2	DIGI	I	Serial data input synchronized with BCK (complement of 2)
3	ERFO	O	Signal output for discriminating whether or not DADT has interpolated data
4	UNDF	O	Detect result for ADDT L, R channel data of -54 dB or less ("L": -54 dB or less)
5	OVFL	O	Detect result for ADDT L channel overflow ("L": overflow detected)
6	OVFR	O	Detect result for ADDT R channel overflow ("L": overflow detected)
7	VSS	GND	
8	SUBT	I	Selects whether subcode or 18-bit data is output to ADDT and DIGO ("H" or open: 18-bit data output, "L": subcode output)
9	LSB1	I	MSB/LSB fast switching for DADT, ADDT, DIGI, DIGO ("H" or open MSB fast, L: LSB fast)
10	LSB2	I	MSB/LSB fast switching for DAC2, ADC2L (ADC2R) ("H" or open MSB fast, L: LSB fast)
11	OVON	I	Overflow detect result on/off ("H" or open: OVFL, OVFR output valid, L: OVFL, OVFR fixed "H")
12	LCF	I	Low-cut filter on/off ("H" or open: on)
13	ADDA	O	"H" in AD mode (DASL = DIAN = "L")
14	DIAN	I	Sets AD and DA modes
15	DASL	I	Sets AD and DA modes
16	MUTE	I	Soft muting on/off ("H": mute on)
17	ATLV	I	Digital volume range setting ("H" or open: 0 - -60, -∞ dB, "L": +12 - -48, ∞ dB)
18	ATON	I	Digital volume on/off ("H" or open: off)
19	ATDN	I	Digital volume level down
20	ATUP	I	Digital volume level up
21	ATCK	I	Digital volume level setting clock and soft muting external clock
22	ATEX	I	Soft muting operation clock selection ("H" or open: internal clock, "L": ATCK)
23	VDD	—	Power supply (+5 V)
24	NC	—	
25	VDD'	—	Oscillator circuit power supply (+5 V)
26	SCK	O	Oscillator clock output
27	NC	—	
28	XTLI	I	Crystal connector and clock input pin
29	NC	—	
30	XTLO	O	Crystal connector pin (24.576 MHz oscillation frequency possible)
31	VSS'	—	Oscillator circuit GND
32	CKSL	I	Oscillator clock division selection ("H" or open: no division, "L": 1/2 division)
33	NC	—	
34	NC	—	
35	DOFF	I	DAC2 digital offset on/off ("H" or open: on)
36	APSL	I	Aperture correction filter coefficient selection (not valid in AD mode) ("H" or open: correction active)
37	LRSL	I	L, R channel phase difference correction selection ("H" or open: correction active)
38	DAC2	O	Serial data output to 2-times oversampling DA converter (complement of 2)
39	VSS	—	Power supply (+5 V)
40	BKSL	I	LRCK, BCK input timing switch ("H" or open: LRCK change point and BCK leading edge synchronized, "L": LRCK change point and BCK trailing edge synchronized)
41	INSL	I	DADT, DIGI, ADC2L (ADC2R) data incorporation clock selection ("H" or open: BCK, "L": INCK)
42	ADSL	I	ADC2L, ADC2R data selection ("H" or open: ADC2L, "L": ADC2L and ADC2R switched by LRCK2)
43	NC	—	
44	WCK2	O	Clock equivalent to 4fs
45	LR21	O	DAC2 L, R channel discrimination signal in I ² S format

Pin No.	Pin Name	I/O	Description
46	APTL	O	Aperture signal
47	APTR	O	Aperture signal
48	LRCK2	O	DAC2, ADC2L (ADC2R) L, R channel discrimination signal (equivalent to 2fs) ("L": L channel, "H": R channel).
49	XLRCK2	O	LRCK2 inverted output
50	XBCK	O	BCK inverted output
51	BCK	I	Clock equivalent to 64fs for DADT, ADDT, DIGI, DIGO data incorporation
52	INCK	I	DADT, DIGI, ADC2L (ADC2R) data incorporation clock
53	VDD	—	Power supply (+5 V)
54	ADC2L	I	Serial data input from 2-times oversampling AD converter (complement of 2)
55	ADC2R	I	Serial data input from 2-times oversampling AD converter (complement of 2)
56	LRCK	I	DADT, ADDT, DIGI, DIGO L, R channel discrimination signal (fs) ("L": L channel, "H": R channel)
57	ADDT	O	Serial data output synchronized with BCK (complement of 2)
58	ERFI	I	Signal input for discriminating whether or not DADT has interpolated data (complement of 2)
59	DADT	I	Serial data input synchronized with BCK (complement of 2)
60	OVCW	I	Clock input which determines detect time for OVFL, OVFR and UNDF

IC307 DAT Signal Processor (CXD2601Q)

This processor is an LSI to process recording and playback signals of the R-DAT system, in a single chip and provided with digital PLL, modem, error correction circuit, digital I/O, RAM control circuit, etc.

Pin No.	Pin Name	I/O	Description
1, 2	A08, A09	I/O	RAM address A08, A09
3	VDD	—	5 V
4-6	A10-A12	I/O	RAM address A10-A12
7, 8	A13, A14	O	RAM address A13, A14
9	XWE	O	RAM write enable signal
10	XOE	O	RAM output enable signal
11	XEAN	O	External addressing bus interrupt enable signal
12	TST1	I	Test pin (normally "L")
13	XT1O	O	18.816 MHz crystal oscillator output
14	XT1I	I	18.816 MHz crystal oscillator input
15	VSS	—	GND
16	XRST	I	Reset pin (normally "H")
17	CLKO	I/O	18.816 MHz clock output
18	XCST	I/O	SYEK (internal system clock) generation CLKO division timing signal
19	ATSY	I	ATF sync signal input
20	MCLK	O	9.408 MHz clock output
21	DREF	O	Drum servo reference signal
22	SBPM	O	Discrimination signal determining whether the subcode I/O clock (EXCK) is accepted ("L": accept, "H": ignore)
23	EXCK	I	Subcode I/O data transfer clock (DUTY50)
24	SDSI	I	Subcode serial data input
25	SDSO	O	Subcode serial data output
26	SBSY	O	Subcode I/O sync signal
27	COPY	O	Copy data output
28	EMP	O	Emphasis data output
29	MUTE	I	Mute pin
30	MUTM	O	Mute discrimination signal ("H": muted)
31	UNLK	O	RX PLL lock discrimination signal ("H": locked)
32	ERMN	O	Detects presence or absence of RF ("H": RF present, "L" during REC)

Pin No.	Pin Name	I/O	Description
33	SYMN	O	C1 check result for RF ("H": OK)
34	CHER	I	Signal for discriminating whether C2 is 1 or 2 times (C2 → C1 → C2 or C1 → C2) ("H": 1 time, "L": 2 times)
35	PLCK	I/O	RF PLL clock output
36	TST2	I	Test pin (normally "L")
37	RFDT	I	RF signal input
38	XCS	I	Subcode I/O chip select ("L": select)
39	SWP	I	RF switching pulse ("L": A-CH, "H": B-CH)
40	VSS	—	GND
41	PIPC	O	REC data PILOT/PCM discrimination signal ("H": PILOT, during playback: always "L")
42	REPB	O	Record/playback switching signal ("H": record)
43	REDT	O	Recording signal output, fixed "L" during playback
44	TST4	I	Test pin (normally "L")
45	TST3	O	RX APLL PD output (comparator output)
46	TST5	I	RX APLL oscillator cell amp input
47	TST6	O	RX APLL oscillator cell amp inverted output
48	PLCO	I	RX APLL external VCO clock input
49	PLVR	O	RX APLL comparison signal when external comparator is active (Vin) Not in use
50	PLVF	O	RX APLL comparison signal when external comparator is active (Rin) Not in use
51	MSSL	I	Master/slave setting ("H": master (fixed with the equipment), "L": slave)
52	RX	I	Digital input
53	VDD	—	5 V
54	TX	O	Digital output
55	AUDR	I	Audio mode/data recorder mode setting ("H": audio mode, "L": data recorder mode)
56	EXSY	I/O	Complete copy sync signal (25/3 - 100/3 Hz)
57	EXSN	I/O	Complete copy sync signal (25/3 - 100/3 Hz)
58	F128	I/O	128fsCK (normal)/256fsCK (×2) (DUTY50)
59	F256	O	256fsCK (normal)/512fsCK (×2) (DUTY50)
60	F512	O	512fsCK (normal)/512fsCK (×2) (DUTY50)
61	ADLF	I	Signal for discriminating whether ADDT serial data is MSB first or LSB first ("H": LSB first)
62	DALF	I	Signal for discriminating whether DADT serial data is MSB first or LSB first ("H": LSB first)
63	XT20	O	22.5792 MHz crystal oscillator output
64	XT21	I	22.5792 MHz crystal oscillator input
65	VSS	—	GND
66	XT30	O	49.152 MHz crystal oscillator output (24.576 MHz in B mode)
67	XT31	I	49.152 MHz crystal oscillator input (24.576 MHz in B mode)
68	FSEN	I	F128, BCK, LRCK input/output switch ("H": output)
69	LR03	O	LR02 inversion
70	LR02	O	LRCK 16BCK delay signal
71	LR01	O	LRCK 15BCK delay signal
72	LRCK	I/O	fs (normal)/2fs (×2) ("L": L-CH, "H": R-CH)
73	WCK	I/O	2fs (normal)/4fs (×2) (input mode only for testing)
74	XBC	O	BCK inversion
75	BCK	I/O	64fs (normal)/128fs (×2)
76	ADDT	I	Serial AD data (complement of 2)
77	DADT	O	Serial DA data (complement of 2)
78	DADO	I	Digital output (DA) data input (normally connected to DADT)
79	ADDI	O	Digital input (AD) data output (normally connected to ADDN)
80	ADDN	I	Digital input (DA) data input
81	ERRI	I	Digital output V-FLAG data input (normally connected to ERRF)
82	ERRF	O	Signal output for discriminating whether or not DADT has interpolated data ("H": interpolated data)

Pin No.	Pin Name	I/O	Description
83	MNTG	O	Error correction status monitor trigger
84-89	D7-D2	I/O	RAM data bus D7-D2
90	VSS	—	GND
91, 92	D1, D0	I/O	RAM data bus D1, D0
93-100	A00-A07	I/O	RAM address A00-A07

IC311 Mechanism/Servo Micon (CXP80524-046Q)

The mechanical deck servo systems are controlled by the captioned micon according to instructions from the main micon (IC312).

Pin No.	Pin Name	I/O	Connected to	Description
1		O		Not in use
2	<u>BUSY</u>	O	Main Micon	Busy (Active "L") to the Main Micon
3		O		Not in use
4	REEL_CCW	O	Mechanism	Reel motor CCW ("L": RVS direction) }*1
5	REEL_CW	O	Mechanism	Reel motor CW ("H": FWD direction) }
6	C_DIR_RVS	O	Mechanism	Capstan Direction ("L": FWD, "H": RVS)
7	PLN_ON	O	Mechanism	Plunger On
8	PLN_KICK	O	Mechanism	Plunger Kick
9	D_ON	O	Mechanism	Drum On ("H": The drum is revolving)
10	D_DIR_RVS	O	Mechanism	Not in use
11-16		O		Not in use
17	LE	O	Mechanism	Loading Motor Eject }*2
18	LL	O	Mechanism	Loading Motor Load }
19	CAS_M_OUT	O	Mechanism	Cassette control motor Out }*3
20	CAS_M_IN	O	Mechanism	Cassette control motor In }
21-24		—		Not in use
25	RE_FWD	I	Mechanism	Encoder SW2 }*4
26	RE_STOP	I	Mechanism	Encoder SW1 }
27-30	<u>END_LED_ON</u>	O	Mechanism	End sensor ON Illuminated upon "L" (rectangular wave of about 1kHz). It is not output unless a cassette is mounted ("H").
31	<u>MP</u>	I		Microprocessor mode selected (the equipment is fixed at "L").
32	<u>RST</u>	I		System Reset (low active)
33	Vss	—		Power terminal (GND)
34	XTAL	O		System Clock Output
35	EXTAL	I	CXD2601AQ	System Clock Input (9.408 MHz)
36-39		—		Not in use
40	X_SRV_REQ	I	Main Micon	Request for communication from the Main Micon
41	MAIN_DT_I	I	Main Micon	Serial Input from the Main Micon
42	MAIN_DT_O	O	Main Micon	Serial Output to the Main Micon
43	MAIN_CK	I	Main Micon	Serial Clock with the Main Micon
44	AVss	—		GND for A/D
45	AVref	—		Reference Voltage for A/D (+5 V)
46	AVdd	—		Power Supply for A/D (+5 V)
47	T-END	I	Mechanism	Take-up side end sensor input (analog) } Magnetic matter: 0V,
48	S-END	I	Mechanism	Supply side end sensor input (analog) } Leader tape: AC (*5)
49	CAS_IN	I	Mechanism	Cassette-in switch (S01). "H": Cassette is mounted.
50	REC_EN	I	Mechanism	Rec-enable switch (S01). "H": REC enabled.
51	CAS_LCKed	I	Mechanism	Casecon locked Upon completion of loading: "H"
52	CAS_OUTed	I	Mechanism	Casecon outed Upon completion of loading OUT: "H"
53		I		Not in use
54	ATF_IN	I	RF Amp	ATF PILOT input
55	FG_T	I	Mechanism	Reel FG (T Side) } 6/24Hz (Small reel diameter) -
56	FG_S	I	Mechanism	Reel FG (S Side) } 15/24Hz (Large reel diameter) (In SP FWD)
57	C_FG	I	Mechanism	Capstan FG SP: 674 Hz, LP: 337 Hz
58	D_FG	I	Mechanism	Drum FG 400 Hz: LP REC, 800 Hz: Other modes
59	D_PG	I	Mechanism	Drum PG } Other than LP REC: 800/24Hz
60	D_REF	I	CXD2601AQ	Drum Reference } In LP REC: 400/24Hz

Pin No.	Pin Name	I/O	Connected to	Description
61	MST_CK	I	CXD2601AQ	Master clock (9.408MHz)
62	PB_DT	I	RF Amp	PB Data input to create ATF Sync
63	SWP	O	CXD2601AQ	Switching Pulse "L": Ach, "H": Bch
64	D_PWM	O	Mechanism	PWM Out for Drum
65	C_PWM	O	Mechanism	PWM Out for Capstan
66	PWM_R	O	Mechanism	PWM Out for Reel
67	TEN_PWM	O	Mechanism	PWM Out for Tension Regulator Plunger
68	AGC_PWM	O	RF Amp	PWM Out for AGC
69	SBSY	I	CXD2601AQ	↓ of subsync is detected (XINT2).
70	TEST	I	Pull-up	Test Mode (active "L")
71	POW_DN	I		Not in use
72	Vdd	—		Power terminal (+5 V)
73	Vss	—		Power terminal (GND)
74		—		Not in use
75	ATF_S2	O	CXD2601AQ	ATF Sampling Pulse
76-80		—		Not in use

* 1 Reel motor control

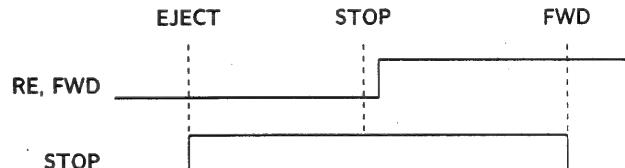
	CCW (counterclockwise)	CW (clockwise)
STOP (only in POWER ON)	L	L
FWD	L	H
RVS	H	L
Prohibit	H	H

*4 Encoder

RF-FWD	RE_STOP	Position
L	L	EJECT
L	H	STOP UNLD-STOP
H	L	FWD
H	H	STOP-FWD

*2 Loading motor control

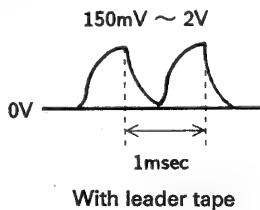
	LE	LL
—	L	L
LOAD	L	H
EJECT	H	L
Brake	H	H



*3 Casecon motor control

	OUT	IN
—	L	L
IN	L	H
OUT	H	L
Brake	H	H

*5 End sensor



IC312 Main Micon (CXP80524-045Q)

This Micon generally controls the operation of the equipment while exchanging data with the display micon (IC701) and mechanism/servo micon (IC311) in serial communications, including the DAT signal processor (IC307), attenuator (IC306), clock (IC330), digital filter (IC363) and other IC.

Pin No.	Pin Name	I/O	Connected to	Description
1		O		Not in use
2	<u>L_MUTE</u>	O	Line Out	Line Mute (Active "L")
3		O		Not in use
4		O		Not in use
5	<u>WRT</u>	O	Clock IC	Write request (Active "L")
6	<u>RD</u>	O	Clock IC	Read request (Active "L")
7-10	<u>ADRS_3-0</u>	O	Clock IC	Address 3-0 (Address BUS)
11-14	<u>DATA_7-4</u>	I/O		DATA 7-4 (DATA BUS). Not in use with the equipment
15-18	<u>DATA_3-0</u>	I/O	Clock IC	DATA 3-0 (DATA BUS)
19	<u>ATT_EXT</u>	O	CXD1136Q	Fade attenuator ck externally selected (Active "L")
20	<u>DIG/ANA</u>	O	CXD1136Q	Fade In/Out switching for DIG ("L")/ANA ("H")
21	<u>REC/PB</u>	O	CXD1136Q	Fade In/Out REC switching for ("L")/PB ("H")
22	<u>ATT_CK</u>	O	CXD1136Q	Clock for fade In/Out
23	<u>DTR</u>	O	CXD2601AQ	Audio use ("H")/Data Recorder use ("L"). Becomes "L" in after-recording and searching.
24	<u>OPT/COA</u>	O	Digital I/O	Switching for Optical ("L")/Coaxial ("H")
25	FS32	O	1Bit DAC	"H" upon Fs = 32kHz. "L" for others.
26	<u>RAM_SEL</u>	O		Not in use
27	<u>DISP_REQ</u>	O	Display Micon	Request for communication with the Display Micon ("L" Active)
28	<u>SD_REQ</u>	O	CXD2601AQ	Request for communication with CXD2601 ("L" Active)
29	<u>SRV_REQ</u>	O	Mechanism Micon	Request for communication with the Mechanism Micon ("L" Active)
30	<u>CLOCK_SEL</u>	O	Clock IC	Clock IC chip selected
31	<u>MP</u>	I		Microprocessor mode selected (fixed at "L" with the equipment)
32	<u>RST</u>	I		System Reset ("L" Active)
33	Vss	—		Power terminal (GND)
34	<u>XTAL</u>	O		System Clock Output
35	<u>EXTAL</u>	I	CXD2601AQ	System Clock Input (9.048 MHz)
36	<u>DISP_ACK</u>	I	Display Micon	ACKnowledge (Active "L")
37	<u>DISP_DT_I</u>	I	Display Micon	Serial Input
38	<u>DISP_DT_O</u>	O	Display Micon	Serial Output
39	<u>DISP_CK</u>	I	Display Micon	Serial clock
40	<u>SBSY</u>	I	CXD2601AQ	Subcode sync
41	<u>SR_DT_IN</u>	I	CXD2601AQ & Mechanism Micon	Serial Data In
42	<u>SR_DT_OUT</u>	O		Serial Data Out
43	<u>SR_CK</u>	I/O		Serial clock (In/Out) to Sub Code Interface
44	AVss	—		GND for A/D
45	AVref	—		Reference Voltage for A/D (+5 V)
46	AVdd	—		Power Supply for A/D (+5 V)
47		I		Not in use
48		I		Not in use
49	<u>BUSY</u>	I	Mechanism Micon	Mechanism servo micon Busy (Active "L")
50	AU_BUS_IN	I	Audio Bus	Not in use

Pin No.	Pin Name	I/O	Connected to	Description
51	TM_IN	I	Clock IC	TM_OUT for clock IC
52	MUT_MON	I	CXD2601AQ	Mute monitor (Active "H")
53	LVL_SYNC	I	Audio Block	Start ID is written by entering Level Sync Input audio.
54		I		Not in use
55	<u>TRQ_TEST</u>	I	Pull-up	Not in use
56	<u>NO_CAS_TEST</u>	I	Pull-up	Not in use
57	TIME_24/12	I	Pull-up	Time indication "H": 12 hours (AM, PM) "L": 24 hours display
58	DATE_ORDER	I	Pull-up	Order of DATA display "H": Year, month and day "L": Month, day and year
59-62	AF_3-0	I	Pull-up	Not in use
63		O		Not in use
64	<u>L_MUTE</u>	O	Pull-up	Line Mute (Active "L"). Not in use with the equipment
65	<u>TR_MUTE</u>	O	Line Out	Transistor Mute (Active "L")
66	MUTE_1136	O	CXD1136Q	Mute for CXD1136 (Active "H")
67	MUTE_2061	O	CXD2601AQ	Mute for CXD2601 (Active "H")
68	A_D_PWR_DWN	O	AK5339	A/D Converter Power Down Mode (Active "H"). The AD converter is turned OFF upon digital input/output.
69	ER_MON	I	CXD2601AQ	Error Monitor (Data Valid)
70	<u>TEST</u>	I	Pull-up	Test Mode (Active "L")
71	POW_DN	I	+5 V	Not in use
72	Vdd	—		Power terminal (+5V)
73	Vss	—		Power terminal (GND)
74		—		Not in use
75	D_F_ATT	O	CXD2560M	Communication line (Serial Data) with Digital Filter
76	<u>D_F_SHIFT</u>	O	CXD2560M	Communication line with Digital Filter (Shift Clock; shifted by ↓ and taken in by ↑)
77	<u>D_F_LATCH</u>	O	CXD2560M	Communication line (Latch Pulse) with Digital Filter
78, 79	MODE2, 1	O	CXA1364R	Mode Control of the RF amplifier
80		O		Not in use

IC330 Real Time Clock (RP5C62)

The Clock is an IC for clock and calendar and backed up by a lithium battery when the power supply to the set is OFF.

Pin No.	Pin Name	I/O	Description
1	<u>CS</u>	I	Chip select input. Active "L"
2	CE	I	Chip enable input. Active "H"
3	TMOUT	O	Interval output
4-7	A0-3	I	4 bit address input
8	<u>RD</u>	I	Read-out control input
9	Vss	—	Power terminal (GND)
10	<u>WR</u>	I	Write-in control input
11-14	<u>D0-3</u>	I/O	4 bit data input/output
15	<u>INTR</u>	O	Interrupt output. A 2048Hz signal is output here with the equipment.
16	OSCIN	I	Clock input (32.768kHz)
17	OSCOUT	O	Clock output
18	VDD	—	Power terminal (+5 V)

IC362 Pulse D/A Converter (CXD2561M)

The Converter is a small, high-performance 1 bitpulse D/A converter that provides 4 asymmetrical PWM wave outputs in each ch of L/R.

Pin No.	Pin Name	I/O	Description
1	DVDD	—	Digital power supply
2	TEST	I	Test terminal. Normally fixed at "L."
3	INIT	I	Again synchronized at the buildup edge of the signal.
4	LRCKI	I	LRCK input
5	DRI	I	Rch data input
6	DLI	I	Lch data input
7	BCKI	I	BCK input
8	DVss	—	Digital GND
9	512Fs	O	512Fs output
10	XVss	—	Clock GND
11	XIN	I	X'tal oscillator input terminal (512Fs)
12	XOUT	O	X'tal oscillator output terminal
13	XVDD	—	Clock power supply
14	VSUB	—	Substrate. Connected to GND.
15	AVDDR	—	Analog power supply
16	R1 (+)	O	Rch PLM output 1 (normal phase)
17	AVssR	—	Analog GND
18	R1 (-)	O	Rch PLM output 1 (reverse phase)
19	R2 (+)	O	Rch PLM output 2 (normal phase)
20	R2 (-)	O	Rch PLM output 2 (reverse phase)
21	AVDD	—	Analog power supply
22	AVss	—	Analog GND
23	L2 (-)	O	Lch PLM output 2 (reverse phase)
24	L2 (+)	O	Lch PLM output 2 (normal phase)
25	L1 (-)	O	Lch PLM output 1 (reverse phase)
26	AVssL	—	Analog GND
27	L1 (+)	O	Lch PLM output 1 (normal phase)
28	AVDDL	—	Analog power supply

IC363 Digital Filter (CXD2560M)

The Filter is a digital audio 8x oversampling digital filter with builtin L/R 2ch filter, noise shaping attenuator, soft muting deemphasis, etc.

Pin No.	Pin Name	I/O	Description
1	Vss	—	Power terminal (GND)
2	SYSM	I	System mute input. Effective upon "H"
3	ATT	I	ATT data input in CTL "L."
4	SHIFT	I	EMP input upon CTL "H."
5	LATCH	I	Shift clock input upon CTL "L."
6	CTL	I	FS32 input upon CTL "H."
7	INIT	I	Latch clock input upon CTL "L."
8	BCKI	I	FS48 input upon CTL "H."
9	DATAI	I	Pull-down in the IC. Direct input mode upon "H." Serial transfer mode upon "L."
10	LRCKI	I	Synchronized again at the buildup edge of the signal.
11	TEST	I	BCK input
12	Vss	—	Data input
13	128Fs	O	LRCK input
14	INVI	I	Test terminal. Fixed at "L" during normal use.
15	INVO	O	Power terminal (GND)
16	INVO2	O	128Fs clock output
17	MCLK	I	Inverter input
18	VDD	—	Inverter output
19	BCKO	O	Master clock input (f=512Fs)
20	DL	O	Power terminal (+5 V)
21	DR	O	BCK output
22	LRCKO	O	Lch data output
23	FLGL	O	LRCK output
24	FLGR	O	Lch ø mute flag output
			Rch ø mute flag output

IC701 Display Micon (CXP5058H-658Q)

The Micon controls key input, FL tube display, remote control signal input, level meter (IC702) and EEPROM (IC703) according to instructions from the Main Micon (IC312).

Pin No.	Pin Name	I/O	Connected to	Description
1-18	e_v_SEG	O	FL tube FL701	FL Segment 'e'-'v'
19-28	10_1_G	O	FL tube FL701	FL Grid #10-#1
29	DSP_REQ	I	MAIN Micon	Communication request ("L" Active)
30	XTAL	—	Ceramic oscillator	
31	EXTAL	I	Ceramic oscillator	4.19MHz ceramic oscillator
32	RST	I		System Reset ("L" active)
33	NC	—		Not in use
34	Vdd	I		Power terminal (+5 V)
35-42	AD_0-7	I	Panel switch	Key input A/D converter input #0 - #7
43	NC	—		Not in use
44	DISP_CK	O	MAIN Micon	Shift clock
45	SO	O	MAIN Micon	Serial data OUT
46	SI	I	MAIN Micon	Serial data IN
47	DSP_ACK	O	MAIN Micon	Acknowledge (Active "L")
48	REC_MODE	I	S703	REC MODE "H": Standard, "L": Long
49	TEST	I	Pull-down	Test mode (Active "L")
50	CLOCK_SET	I	S704	CLOCK SET switch S704 (Active "L")
51-54	LVL_DT_0-3	I/O	Level Meter IC	Level Meter Data 0-3
55, 56	LVL_ADDRS_0, 1	O	Level Meter IC	Level Meter Data 0, 1
57	LVL_RD	O	Level Meter IC	Level Meter Read Mode (Active "L")
58	LVL_WR	O	Level Meter IC	Level Meter Write Mode (Active "L")
59	LVL_SEL	O	Level Meter IC	Level Meter IC Select (Active "L")
60	RM_SEL	O	IC703	External remote controller selected
61	PY2	I	Pull-up	Not in use
62	RMC	I	IC703	Remote control data input
63	RMC_CAT	I	Pull-down	Remote control category "L": DAT1, "H": DAT2. Fixed at "L" with the equipment.
64	TR_MUTE	I	IC431	Level meter mute (Active "L")
65	BUSY	I	EEPROM	BUSY signal (Active "L")
66	ROM_DT_IN	I	EEPROM	Data input
67	ROM_DT_OUT	O	EEPROM	Data output
68	SHIFT_CK	O	EEPROM	Shift clock
69	CE	O	EEPROM	Chip enable
70	DTC/XPCM	I	Pull-up	Equipment model discrimination input. Fixed at "H" with the equipment
71	Vss	I		Power terminal (GND)
72	TX	—	Open	Not in use
73	NC	—	Open	Not in use
74	TEX	—	+5 V	Not in use
75	Vref	I	+5 V	Analog board reference voltage
76	Vfdp	I	-25 V	FL display tube driving voltage
77-80	a_d SEG	O	FL tube	FL Segment 'a'-'d'

SECTION 5

EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts

Example: KNOB,BALANCE(WHITE)...(RED)

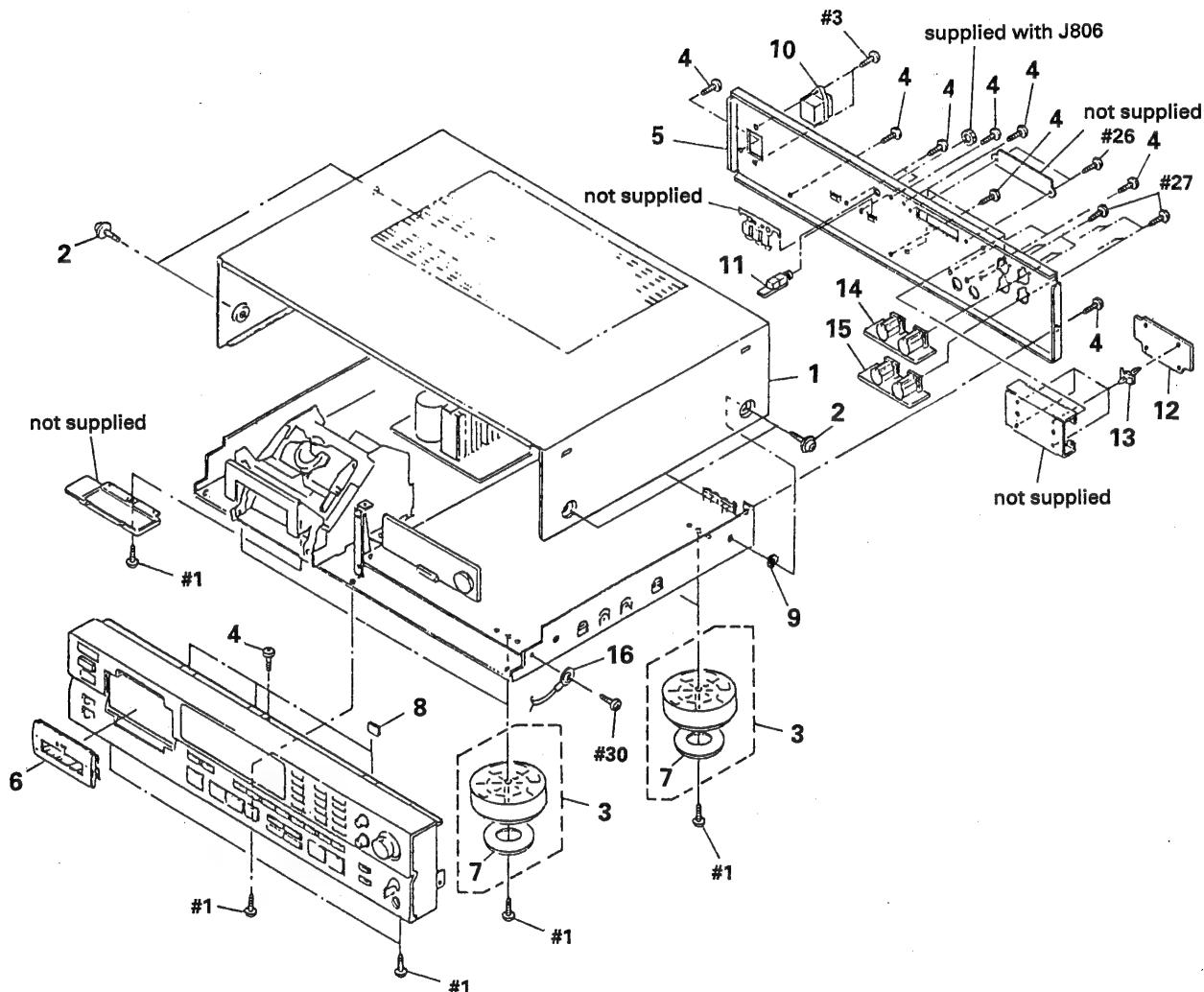
↑ ↑
Parts color Cabinet's color

- Items marked ** are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware(# mark) list is given in the last of this parts list.
- CND : Canadian

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

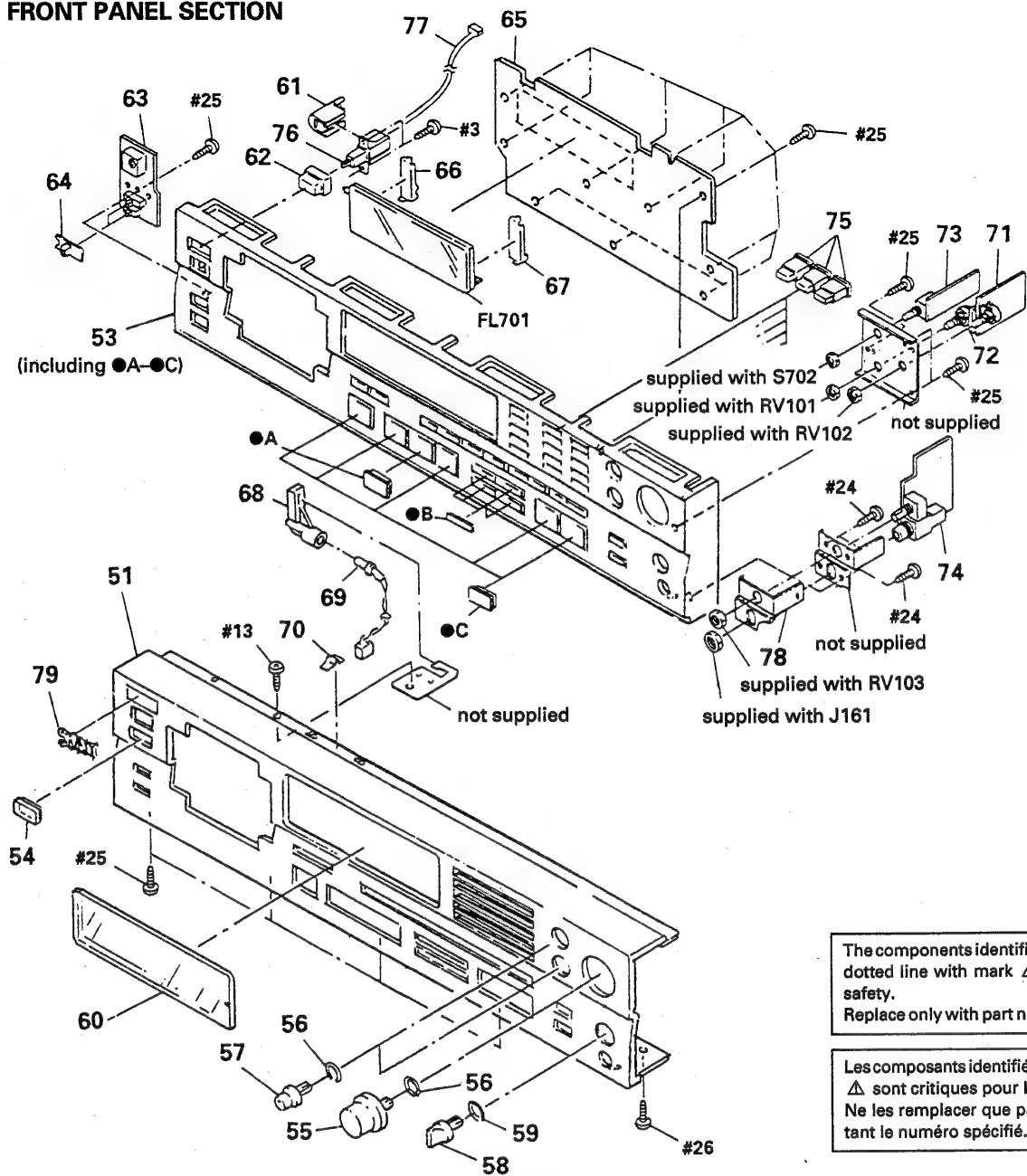
Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

5-1. CABINET SECTION



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	* 3-350-407-81	CASE		9	3-942-525-01	BLIND (1), KNOB	
2	3-704-366-01	SCREW (CASE) (M3X8)		10	Δ * 1-580-375-21	INLET 3P	
3	X-4885-950-1	FOOT ASSY		11	* 1-640-289-11	REMOTE BOARD	
4	3-703-685-21	SCREW (+BV 3X8)		12	* A-2006-673-A	BAL CONV BOARD, COMPLETE	
5	* 3-372-237-01	PANEL, BACK (US, CND)		13	* 3-703-353-01	SUPPORT, PC BOARD	
5	* 3-372-237-11	PANEL, BACK (AEP, UK)		14	* 1-640-286-11	BAL-IN BOARD	
6	A-2003-954-A	PANEL (CASSETTE) ASSY		15	* 1-640-287-11	BAL-OUT BOARD	
7	4-923-836-11	CUSHION		16	* 1-555-724-00	WIRE, GROUND	
8	3-831-441-XX	CUSHION, SPEAKER					

5-2. FRONT PANEL SECTION

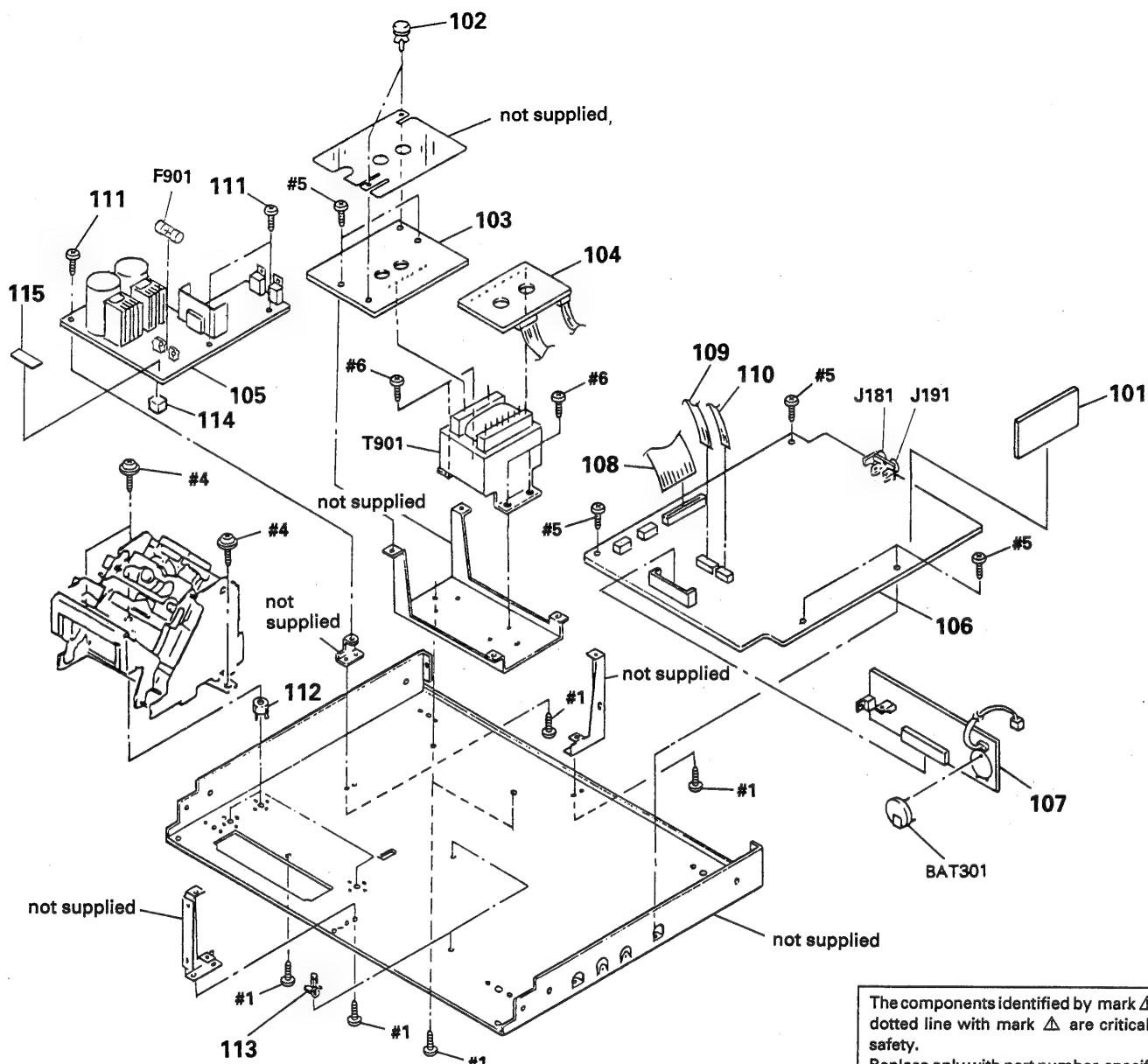


The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

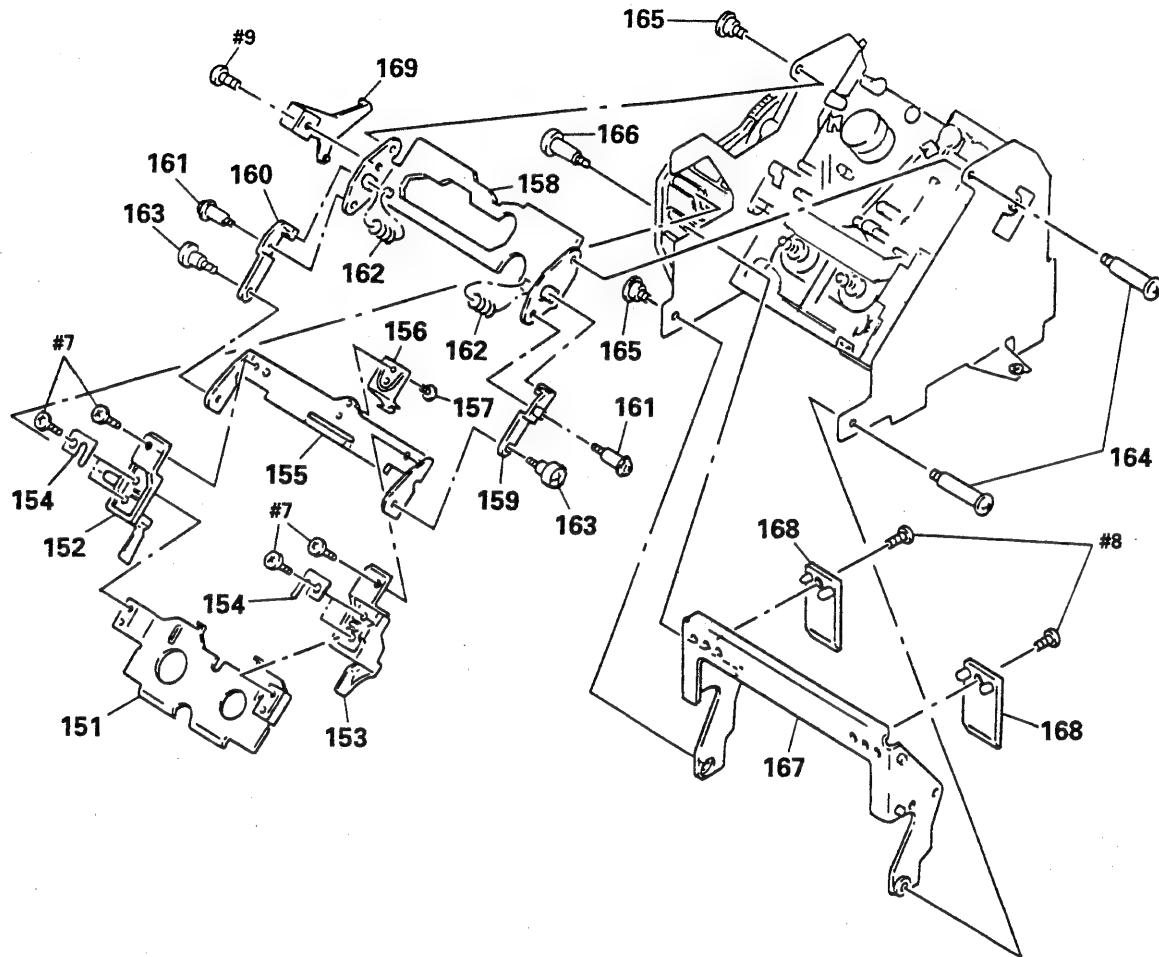
Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	3-368-713-42	PANEL (FRONT)		67	* 4-922-523-01	HOLDER (RIGHT)	
53	X-3363-610-1	ESCRUTCHEON (PANEL) ASSY		68	* 4-925-758-11	COVER (L), LAMP	
54	3-364-919-01	FILTER		69	1-518-634-11	LAMP, PILOT	
55	3-368-707-01	KNOB (REC LEVEL)		70	3-846-312-00	SPACER	
56	3-356-957-01	SPRING		71	* 1-639-325-11	REC VOL BOARD	
57	3-364-173-11	KNOB (BAL)		72	* 1-639-326-11	BALANCE VOL BOARD	
58	3-354-931-01	KNOB (DIA. 10)		73	* 1-639-328-11	INPUT SW BOARD	
59	3-354-981-01	SPRING (SUS), RING		74	* 1-639-327-11	HEADPHONE BOARD	
60	3-368-698-01	WINDOW (FL TUBE)		75	3-364-927-01	BUTTON (10 KEY)	
61	3-575-524-00	COVER, POWER SWITCH		76	△ 1-554-920-21	SWITCH, PUSH (AC POWER) (1 KEY)	
62	4-917-460-01	KNOB, POWER		77	1-590-321-71	LEAD (WITH CONNECTOR)	
63	* 1-639-329-11	TIMER SW BOARD		78	* 3-372-627-02	PLATE (HP), GROUND	
64	4-931-421-11	KNOB (T & S)		79	4-908-848-31	EMBLEM, SONY	
65	* A-2006-646-A	CONTROL SW BOARD, COMPLETE		FL701	1-519-672-11	INDICATOR TUBE, FLUORESCENT	
66	* 4-922-524-01	HOLDER (LEFT)					

5-3. CHASSIS SECTION



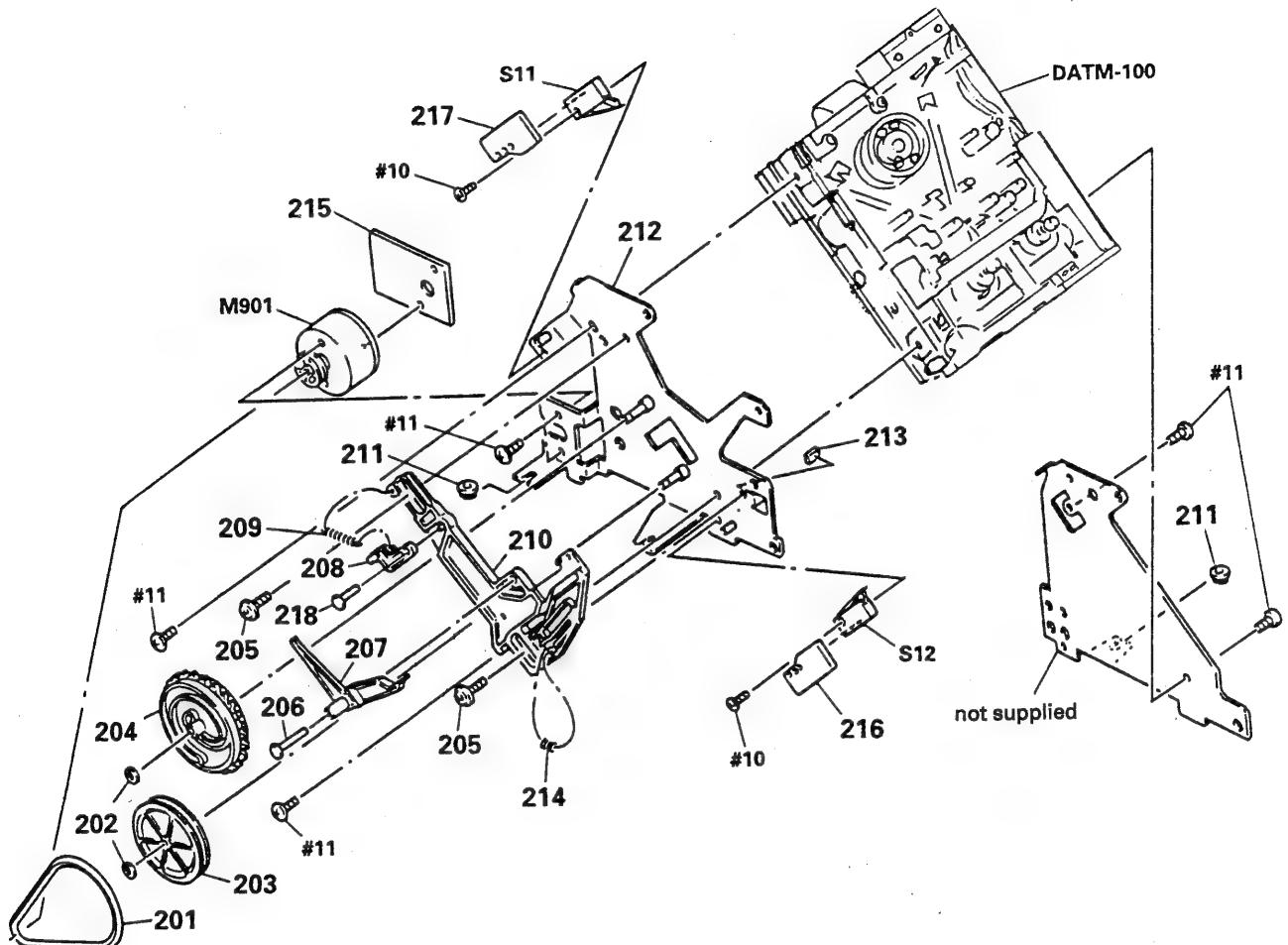
Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
101	* 1-639-920-11	PLL BOARD		111	4-886-821-11	SCREW, S TIGHT, +PTTWH 3X6	
102	4-812-134-00	RIVET NYLON, 3.5		112	3-368-709-01	HOLDER (MD)	
103	* 1-639-333-11	PRIMARY BOARD		113	* 3-670-570-00	SPACER, SUPPORT	
104	* 1-639-332-11	RELAY (POWER) BOARD		114	* 3-685-232-01	SPACER, VI	
105	* A-2006-647-A	POWER BOARD, COMPLETE		115	3-701-947-15	LABEL (T2.5A), FUSE (AEP, UK)	
106	* A-2006-648-A	MAIN BOARD, COMPLETE		BAT301	△ 1-528-229-11	BATTERY, LITHIUM CR-2450	
107	* A-2006-553-A	SUB BOARD, COMPLETE		F901	△ 1-532-286-00	FUSE, TIME-LAG (T2.5A) (AEP, UK)	
108	1-590-915-11	WIRE, FLAT TYPE (30 CORE)		F901	△ 1-532-744-11	FUSE, GLASS TUBE (2.5A) (US, CND)	
109	1-590-916-11	WIRE, FLAT TYPE (10 CORE)		T901	△ 1-450-556-11	TRANSFORMER, POWER (US, CND)	
110	1-590-914-11	WIRE, FLAT TYPE (6 CORE)		T901	△ 1-450-557-11	TRANSFORMER, POWER (AEP, UK)	

5-4. MECHANISM SECTION 1



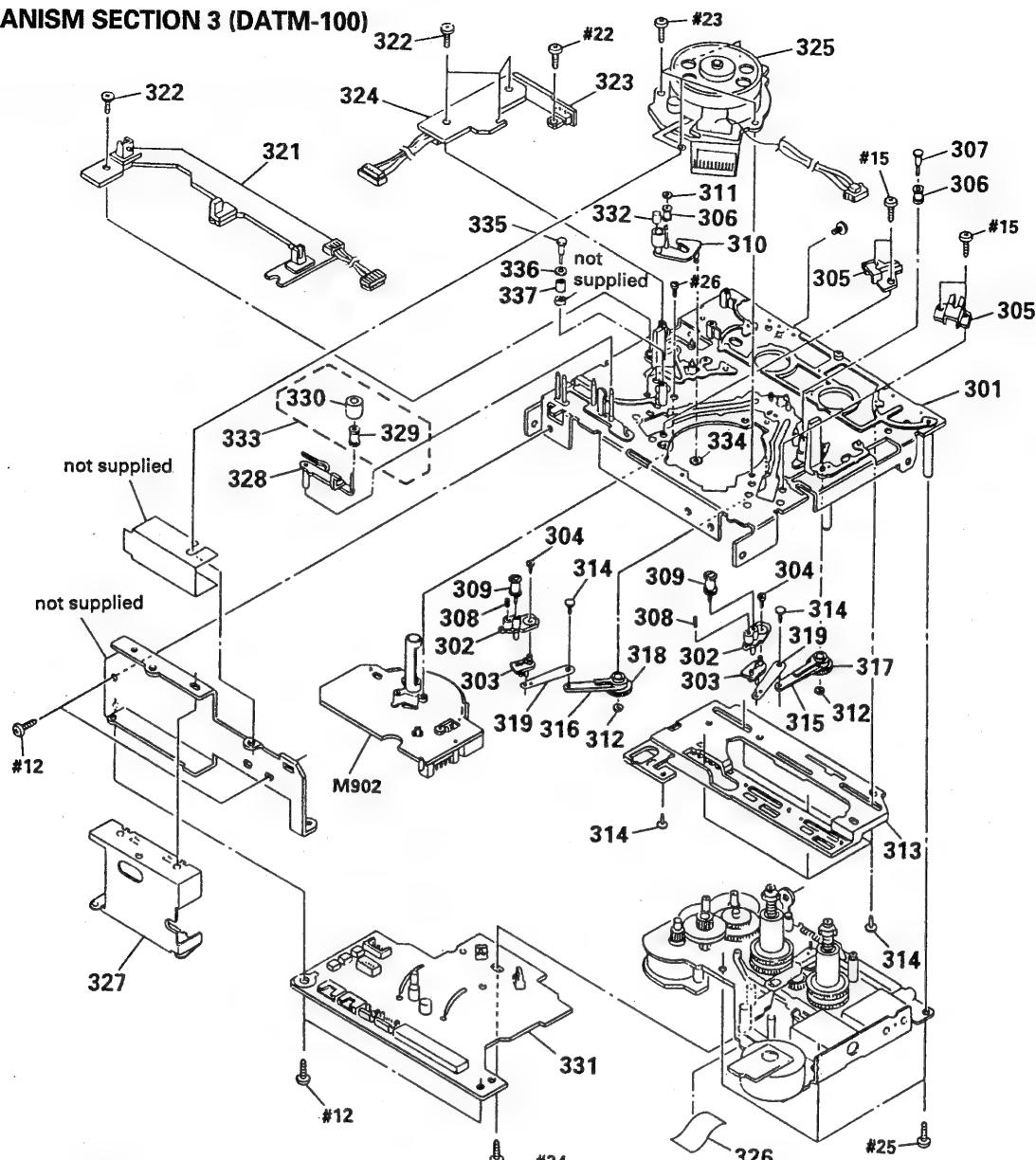
Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
151	4-931-476-01	HOLDER (LOWER)		161	4-918-991-01	SCREW, STEP	
152	4-931-484-01	HOLDER (C-LEFT)		162	3-537-214-00	SPRING, COMPRESSION	
153	4-931-486-01	HOLDER (C-RIGHT)		163	3-312-161-00	SCREW, STEP, PRECISION	
154	3-366-308-01	SPRING (SIDE), PLATE		164	4-931-463-01	SCREW (STEP)	
155	* 4-931-485-01	HOLDER (C-INNER)		165	2-236-956-00	SCREW, STEP	
156	4-931-461-01	SPRING (CENTER), LEAF		166	4-931-471-01	SCREW (STEP)	
157	3-352-517-01	SCREW (M2X2.5)		167	4-931-474-01	HOLDER (WINDOW)	
158	* 3-369-235-01	PLATE, FULCRUM		168	4-931-469-01	PLATE, ORNAMENTAL	
159	4-931-481-01	ARM (LIMITER L)		169	* X-4919-020-1	JOINT ASSY	
160	4-931-473-01	ARM (LIMITER R)					

5-5. MECHANISM SECTION 2



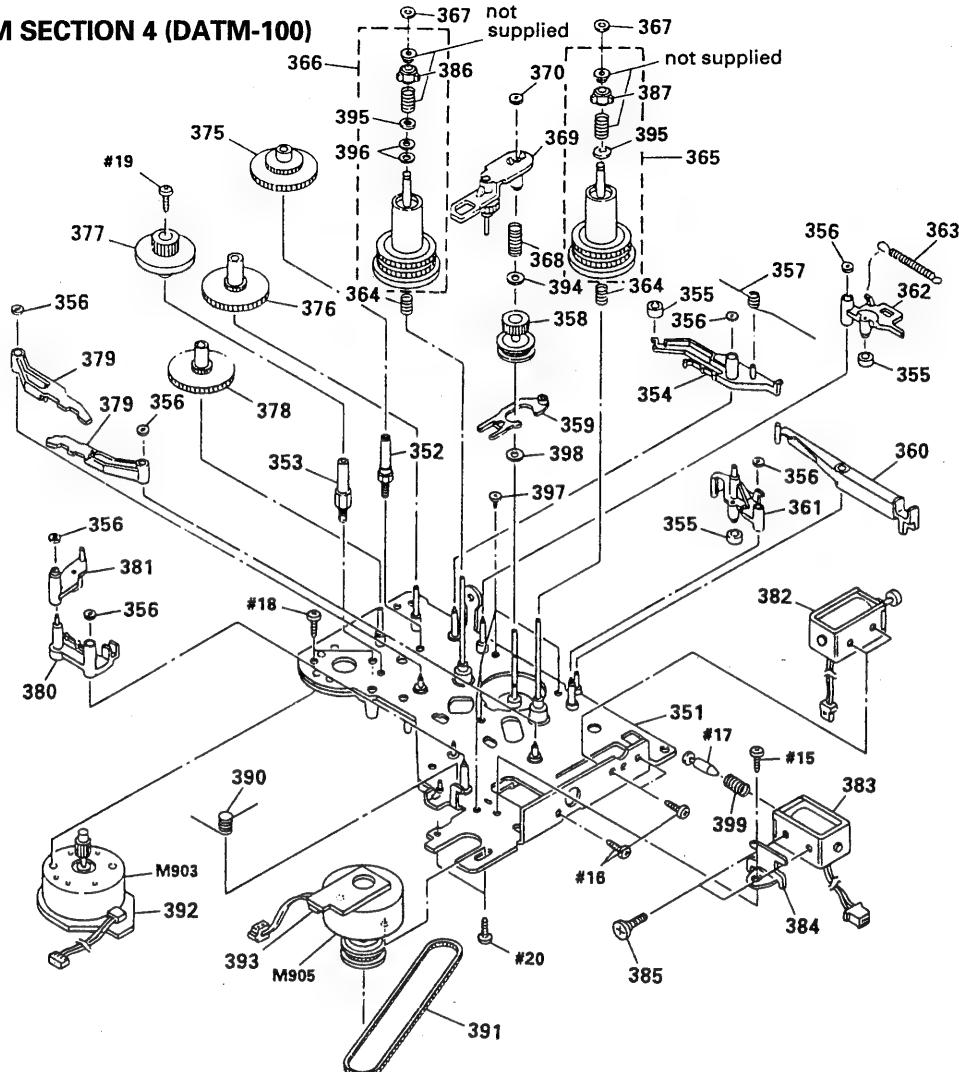
Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
201	4-931-470-01	BELT (DRIVING)		212	* X-4919-023-1	PLATE ASSY, SIDE	
202	3-307-948-21	WASHER, NYLON		213	9-911-863-XX	SPACER	
203	4-931-459-01	PULLEY		214	3-537-215-00	SPRING, COMPRESSION	
204	4-931-477-01	GEAR (CAM)		215	* 1-639-646-11	MOTOR BOARD	
205	4-932-336-01	SCREW (STEP)		216	* 1-639-647-11	SW (IN) BOARD	
206	4-931-468-01	SHAFT (PRESS FITTING)		217	* 1-639-648-11	SW (OUT) BOARD	
207	4-931-490-01	LEVER (LINK)		218	4-936-626-01	SHAFT (ARM PRESS FITTING)	
208	4-931-460-01	ARM (SLIDER)		M901	A-2003-448-A	MOTOR ASSY (CASSETTE COMPARTMENT)	
209	3-549-810-00	SPRING, TENSION		S11	1-570-975-11	SWITCH, SLIDE (CASSETTE TABLE OUT)	
210	4-931-492-01	SLIDER (CAM)		S12	1-572-247-11	SWITCH, SLIDE (CASSETTE TABLE IN)	

5-6. MECHANISM SECTION 3 (DATM-100)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
301	* 3-368-462-01	CHSSIS (OUTSERT), MECHANIAL		319	3-368-415-01	SHAFT (LOAD LEVER JOINT)	
302	* 3-368-390-01	BASE (#1 GUIDE)		321	* 1-639-305-11	TOP END SENSOR BOARD	
303	3-368-409-01	JOINT (#1 GUIDE)		323	* 1-639-301-11	RGN SW BOARD	
304	3-368-413-01	SCREW, +P (1) B1.4X2.5		324	* 1-639-306-11	CAM SLIDER BOARD	
305	* 3-368-442-01	CATCHER		325	8-848-567-11	DRUM ASSY DOU-03A	
306	3-368-399-01	GUIDE, ROLLER		326	9-911-835-XX	SPACER	
307	3-368-428-01	SHAFT (ROLLER GUIDE)		327	* A-2001-587-A	RF COMPLETE ASSY	
308	3-368-436-01	SPRING (#1 GUIDE), COMPRESSION		328	3-368-459-01	LEVER (CLEANER)	
309	X-3337-643-1	GUIDE (RIC) ASSY, ROLLER		329	3-353-812-01	COLLAR (ROLLER)	
310	X-3363-025-1	PINCH (LEVER) ASSY		330	3-352-518-01	ROLLER (CLEANER)	
311	3-315-384-31	WASHER, STOPPER		331	* A-2056-488-A	DRUM DRIVE BOARD, COMPLETE	
312	3-368-398-01	BUSHING		332	3-337-626-01	CAP, PINCH ROLLER	
313	* A-2003-708-A	SLIDER ASSY, CAM		333	X-3337-655-1	ROLLER (CLEANER) ASSY	
314	3-372-761-01	SCREW (M1.7X4), TAPPING		334	3-321-813-01	WASHER	
315	3-368-427-01	LEVER (LOAD-T)		335	3-375-209-01	SHAFT (FIXED GUIDE)	
316	3-368-426-01	LEVER (LOAD-S)		336	3-337-677-01	FLANGE	
317	3-368-444-01	GEAR (LOAD-T)		337	3-337-676-01	GUIDE, FIXED	
318	3-368-443-01	GEAR (LOAD-S)		M902	8-835-361-01	MOTOR, DC U-17B (CAPSTAN)	

5-7. MECHANISM SECTION 4 (DATM-100)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
351	* A-2003-857-A	CHASSIS (REEL) ASSY		378	3-368-402-01	GEAR (CAM DRIVE A, B)	
352	* 3-368-420-01	SHAFT (CAM DRIVE GEAR C)		379	X-3363-024-1	LEVER (BT) ASSY	
353	* 3-368-419-01	SHAFT (CAM DRIVE GEAR D)		380	* 3-368-451-01	LEVER (BT SOLENOID)	
354	* 3-368-455-01	LEVER (GEAR LOCK)		381	* 3-368-454-01	LEVER (BT SELECTION)	
355	3-368-418-01	TUBE (BREAK)		382	1-454-535-11	SOLENOID, PLUNGER (BRAKE)	
356	3-368-398-01	BUSHING		383	1-454-536-11	SOLENOID, PLUNGER (BT CONTROL)	
357	3-368-430-01	SPRING (GEAR LOCK)		384	* 3-368-416-01	BRACKET (B.T SOLENOID)	
358	X-3363-022-1	GEAR (REEL DRIVE) ASSY		385	3-368-423-01	SCREW (M2.6), STEP	
359	* 3-368-411-01	SLIDER (REEL LOCK)		386	2-623-736-01	CLAW (C) (LEFT), REEL	
360	* 3-368-453-01	LEVER (BRAKE SOLENOID)		387	2-623-752-01	CLAW (C) (RIGHT), REEL	
361	* 3-368-447-01	LEVER (BRAKE S)		390	3-368-431-01	SPRING (B.T SOLENOID)	
362	* 3-368-446-01	LEVER (BRAKE T)		391	3-368-417-01	BELT (170TN10-1.0T), TIMING	
363	3-368-438-01	SPRING (BREAK), TENSION		392	* 1-639-303-11	CAM MOTOR BOARD	
364	3-368-432-01	SPRING (FF/REW), COMPRESSION		393	* 1-639-304-11	REEL MOTOR BOARD	
365	A-2003-709-A	TABLE (S) ASSY, REEL		394	3-738-212-21	RETAINER, THRUST, REEL TABLE	
366	A-2003-710-A	TABLE (T) ASSY, REEL		395	3-701-443-11	WASHER, 5 DIA.	
367	3-578-224-00	WASHER		396	3-701-443-21	WASHER, 5 DIA.	
368	3-368-435-01	SPRING (FR LEVER), COMPRESSION		397	2-623-756-01	SCREW, (B1.7X3), TAPPING	
369	X-3364-581-1	LEVER (F/R) ASSY		398	3-701-436-01	WASHER, 1.6	
370	3-315-384-31	WASHER, STOPPER		399	3-370-480-01	SPRING (BT), COMPRESSION	
375	3-368-421-01	GEAR (CAM DRIVE C)		M903	X-3363-109-1	MOTOR (CAM) ASSY	
376	3-373-039-01	GEAR (CAM DRIVE B)		M905	X-3363-110-1	MOTOR (REEL) ASSY	
377	3-368-403-01	GEAR (CAM DRIVE D)					

BAL CONV

SECTION 6

ELECTRICAL PARTS LIST

NOTE:

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

**Les composants identifiés par une marque
△ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.**

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
 - -XX, -X mean standardized parts, so they may have some difference from the original one.
 - **RESISTORS**
All resistors are in ohms
METAL : Metal-film resistor
METAL OXIDE : Metal Oxide-film resistor
F : nonflammable
 - **CND** : Canadian
 - Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
 - **SEMICONDUCTORS**
In each case, u : μ , for example:
 uA ...: μA ..., uPA ...: μPA ...,
 uPB ...: μPB ..., uPC ...: μPC ...,
 uPD ...: μPD ...
 - **CAPACITORS**
 uF : μF
 - **COILS**
 uH : μH

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks	
	A-2006-673-A	BAL CONV BOARD, COMPLETE		IC805	8-759-900-72	IC NE5532P		
		*****	*****	IC806	8-759-900-72	IC NE5532P		
		*****	*****	IC807	8-759-711-18	IC NJM4556D-D		
		< CAPACITOR >				< RESISTOR >		
C801	1-128-426-91	ELECT	47uF	20%	25V	R801	1-215-453-00 METAL	22K 1% 1/6W
C802	1-162-199-31	CERAMIC	10PF	5%	50V	R802	1-215-453-00 METAL	22K 1% 1/6W
C803	1-136-165-00	FILM	0.1uF	5%	50V	R803	1-215-439-00 METAL	5.6K 1% 1/6W
C804	1-136-165-00	FILM	0.1uF	5%	50V	R804	1-215-439-00 METAL	5.6K 1% 1/6W
C805	1-162-213-31	CERAMIC	39PF	5%	50V	R805	1-215-421-00 METAL	1K 1% 1/6W
C806	1-162-213-31	CERAMIC	39PF	5%	50V	R806	1-215-415-00 METAL	560 1% 1/6W
C807	1-136-165-00	FILM	0.1uF	5%	50V	R807	1-215-415-00 METAL	560 1% 1/6W
C808	1-136-165-00	FILM	0.1uF	5%	50V	R808	1-215-415-00 METAL	560 1% 1/6W
C811	1-136-165-00	FILM	0.1uF	5%	50V	R809	1-215-469-00 METAL	100K 1% 1/6W
C812	1-128-427-91	ELECT	100uF	20%	25V	R810	1-215-421-00 METAL	1K 1% 1/6W
C851	1-128-426-91	ELECT	47uF	20%	25V	R811	1-215-433-00 METAL	3.3K 1% 1/6W
C852	1-162-199-31	CERAMIC	10PF	5%	50V	R812	1-215-445-00 METAL	10K 1% 1/6W
C853	1-136-165-00	FILM	0.1uF	5%	50V	R813	1-215-445-00 METAL	10K 1% 1/6W
C854	1-136-165-00	FILM	0.1uF	5%	50V	R814	1-215-437-00 METAL	4.7K 1% 1/6W
C855	1-162-213-31	CERAMIC	39PF	5%	50V	R815	1-215-447-00 METAL	12K 1% 1/6W
C856	1-162-213-31	CERAMIC	39PF	5%	50V	R816	1-215-437-00 METAL	4.7K 1% 1/6W
C857	1-136-165-00	FILM	0.1uF	5%	50V	R817	1-215-447-00 METAL	12K 1% 1/6W
C858	1-136-165-00	FILM	0.1uF	5%	50V	R818	1-215-447-00 METAL	12K 1% 1/6W
C861	1-136-165-00	FILM	0.1uF	5%	50V	R819	1-215-437-00 METAL	4.7K 1% 1/6W
C862	1-128-427-91	ELECT	100uF	20%	25V	R820	1-215-401-11 METAL	150 1% 1/6W
		< CONNECTOR >						
CN803	* 1-564-507-11	PLUG, CONNECTOR 4P			R821	1-215-447-00 METAL	12K 1% 1/6W	
CN804	* 1-564-507-11	PLUG, CONNECTOR 4P			R822	1-215-437-00 METAL	4.7K 1% 1/6W	
		< DIODE >			R823	1-215-401-11 METAL	150 1% 1/6W	
D801	8-719-912-20	DIODE	ISS120		R851	1-215-453-00 METAL	22K 1% 1/6W	
D802	8-719-912-20	DIODE	ISS120		R852	1-215-453-00 METAL	22K 1% 1/6W	
D851	8-719-912-20	DIODE	ISS120		R853	1-215-439-00 METAL	5.6K 1% 1/6W	
D852	8-719-912-20	DIODE	ISS120		R854	1-215-439-00 METAL	5.6K 1% 1/6W	
		< IC >			R855	1-215-421-00 METAL	1K 1% 1/6W	
IC801	8-759-900-72	IC	NE5532P		R856	1-215-415-00 METAL	560 1% 1/6W	
IC802	8-759-900-72	IC	NE5532P		R857	1-215-415-00 METAL	560 1% 1/6W	
IC803	8-759-900-72	IC	NE5532P		R858	1-215-415-00 METAL	560 1% 1/6W	
IC804	8-759-711-18	IC	NJM4556D-D		R859	1-215-469-00 METAL	100K 1% 1/6W	
					R860	1-215-421-00 METAL	1K 1% 1/6W	
					R861	1-215-433-00 METAL	3.3K 1% 1/6W	
					R862	1-215-445-00 METAL	10K 1% 1/6W	

BAL CONV		BAL-IN		BAL-OUT		BALANCE VOL		CAM MOTOR		CAM SLIDER				
Ref. No.	Part No.	Description				Remarks	Ref. No.	Part No.	Description					
R863	1-215-445-00	METAL	10K	1%	1/6W				< FERRITE BEAD >					
R864	1-215-437-00	METAL	4.7K	1%	1/6W				< FERRITE BEAD >					
R865	1-215-447-00	METAL	12K	1%	1/6W		FB801	1-543-900-11	FERRITE BEAD					
R866	1-215-437-00	METAL	4.7K	1%	1/6W		FB802	1-543-900-11	FERRITE BEAD					
R867	1-215-447-00	METAL	12K	1%	1/6W		FB803	1-543-900-11	FERRITE BEAD					
							FB851	1-543-900-11	FERRITE BEAD					
R868	1-215-447-00	METAL	12K	1%	1/6W				< JACK >					
R869	1-215-437-00	METAL	4.7K	1%	1/6W		FB852	1-543-900-11	FERRITE BEAD					
R870	1-215-401-11	METAL	150	1%	1/6W		FB853	1-543-900-11	FERRITE BEAD					
R871	1-215-447-00	METAL	12K	1%	1/6W				< VARIABLE RESISTOR >					
R872	1-215-437-00	METAL	4.7K	1%	1/6W		J803	1-568-005-11	CONNECTOR, XLR TYPE 3P(ANALOG OUTPUT CH1)					
R873	1-215-401-11	METAL	150	1%	1/6W		J804	1-568-005-11	CONNECTOR, XLR TYPE 3P(ANALOG OUTPUT CH2)					
< RESISTOR >														
RV801	1-230-523-11	RES, ADJ, METAL10K					R824	1-215-469-00	METAL	100K	1%	1/6W		
RV802	1-230-523-11	RES, ADJ, METAL10K					R825	1-215-469-00	METAL	100K	1%	1/6W		
RV803	1-230-523-11	RES, ADJ, METAL10K					R874	1-215-469-00	METAL	100K	1%	1/6W		
RV804	1-230-523-11	RES, ADJ, METAL10K					R875	1-215-469-00	METAL	100K	1%	1/6W		

* 1-640-286-11 BAL-IN BOARD														

< CAPACITOR >														
C820	1-162-294-31	CERAMIC	1000pF	10%	50V				< CONNECTOR >					
C821	1-162-294-31	CERAMIC	1000pF	10%	50V		CN102	* 1-564-507-11	PLUG, CONNECTOR 4P					
C870	1-162-294-31	CERAMIC	1000pF	10%	50V				< RESISTOR >					
C871	1-162-294-31	CERAMIC	1000pF	10%	50V		R101	1-259-462-11	CARBON	27K	5%	1/6W		
< CONNECTOR >							R201	1-259-462-11	CARBON	27K	5%	1/6W		
CN806	* 1-564-509-11	PLUG, CONNECTOR 6P							< VARIABLE RESISTOR >					
< JACK >														
J801	1-568-006-11	CONNECTOR, XLR TYPE 3P(ANALOG INPUT CH1)					RV101	1-238-687-11	RES, VAR, CARBON 50K/50K (BALANCE)					
J802	1-568-006-11	CONNECTOR, XLR TYPE 3P(ANALOG INPUT CH2)							*****					

* 1-640-287-11 BAL-OUT BOARD, COMPLETE														

< CAPACITOR >														
C809	1-126-024-11	ELECT	220uF	20%	25V		C06	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V		
C810	1-126-024-11	ELECT	220uF	20%	25V				< MOTOR >					
C822	1-162-294-31	CERAMIC	1000pF	10%	50V		M903	X-3363-109-1	MOTOR (CAM) ASSY					
C823	1-162-294-31	CERAMIC	1000pF	10%	50V				*****					
C859	1-126-024-11	ELECT	220uF	20%	25V				< JUMPER >					
C860	1-126-024-11	ELECT	220uF	20%	25V		JW04	1-216-296-00	METAL CHIP	0	5%	1/8W		
C872	1-162-294-31	CERAMIC	1000pF	10%	50V		JW05	1-216-296-00	METAL CHIP	0	5%	1/8W		
C873	1-162-294-31	CERAMIC	1000pF	10%	50V				< CAM SLIDER BOARD >					
< CONNECTOR >														
CN807	* 1-564-521-11	PLUG, CONNECTOR 6P							*****					

When indicating parts by reference number, please include the board name.

CAM SLIDER

CONTROL SW

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks	
< SWITCH >								
SW1	1-570-953-11	SWITCH, PUSH (1 KEY) (STOP DET)		Q709	8-729-119-78	TRANSISTOR 2SC2785-HFE		
SW2	1-570-953-11	SWITCH, PUSH (1 KEY) (FWD DET)		Q710	8-729-119-78	TRANSISTOR 2SC2785-HFE		

* A-2006-646-A CONTROL SW BOARD, COMPLETE								

* 4-922-523-01 HOLDER (RIGHT)								
* 4-922-524-01 HOLDER (LEFT)								
9-911-839-XX CUSHION								
< CAPACITOR >								
C701	1-161-379-00	CERAMIC	0.01uF	20%	25V	R701	1-249-441-11 CARBON	100K 5% 1/4W
C702	1-161-379-00	CERAMIC	0.01uF	20%	25V	R702	1-249-441-11 CARBON	100K 5% 1/4W
C703	1-124-584-00	ELECT	100uF	20%	10V	R703	1-249-441-11 CARBON	100K 5% 1/4W
C704	1-161-379-00	CERAMIC	0.01uF	20%	25V	R704	1-249-441-11 CARBON	100K 5% 1/4W
C705	1-161-379-00	CERAMIC	0.01uF	20%	25V	R705	1-249-441-11 CARBON	100K 5% 1/4W
C706	1-161-379-00	CERAMIC	0.01uF	20%	25V	R706	1-249-441-11 CARBON	100K 5% 1/4W
< CONNECTOR >								
CN751	1-568-853-11	SOCKET, CONNECTOR 10P		R715	1-249-429-11 CARBON	10K 5% 1/4W		
CN752	1-568-849-11	SOCKET, CONNECTOR 6P		R716	1-249-422-11 CARBON	2.7K 5% 1/4W		
< CIRCUIT BLOCK >								
CP701	1-233-140-11	COMPOSITION CIRCUIT BLOCK	100k x 8	R717	1-249-424-11 CARBON	3.9K 5% 1/4W		
CP702	1-233-140-11	COMPOSITION CIRCUIT BLOCK	100k x 8	R718	1-249-428-11 CARBON	8.2K 5% 1/4W		
CP703	1-233-140-11	COMPOSITION CIRCUIT BLOCK	100k x 8	R719	1-249-434-11 CARBON	27K 5% 1/4W		
CP704	1-233-140-11	COMPOSITION CIRCUIT BLOCK	100k x 8	R720	1-249-429-11 CARBON	10K 5% 1/4W		
< DIODE >								
D701	8-719-107-94	DIODE	ISS202-1	R721	1-249-422-11 CARBON	2.7K 5% 1/4W		
D702	8-719-107-94	DIODE	ISS202-1	R722	1-249-424-11 CARBON	3.9K 5% 1/4W		
< FILTER >								
FL701	1-519-672-11	INDICATOR TUBE, FLUORESCENT		R723	1-249-428-11 CARBON	8.2K 5% 1/4W		
< IC >								
IC701	8-752-832-73	IC	CXP5058H-658Q	R724	1-249-434-11 CARBON	27K 5% 1/4W		
IC702	8-759-995-09	IC	MSM6338RS	R725	1-249-429-11 CARBON	10K 5% 1/4W		
IC703	8-752-330-59	IC	CXK1011P	R726	1-249-422-11 CARBON	2.7K 5% 1/4W		
IC705	8-759-140-11	IC	uPD4011BC	R727	1-249-424-11 CARBON	3.9K 5% 1/4W		
< TRANSISTOR >								
Q701	8-729-119-78	TRANSISTOR	2SC2785-HFE	R728	1-249-428-11 CARBON	8.2K 5% 1/4W		
Q702	8-729-119-78	TRANSISTOR	2SC2785-HFE	R729	1-249-434-11 CARBON	27K 5% 1/4W		
Q703	8-729-119-78	TRANSISTOR	2SC2785-HFE	R730	1-249-429-11 CARBON	10K 5% 1/4W		
Q704	8-729-119-78	TRANSISTOR	2SC2785-HFE	R731	1-249-422-11 CARBON	2.7K 5% 1/4W		
Q705	8-729-119-78	TRANSISTOR	2SC2785-HFE	R732	1-249-424-11 CARBON	3.9K 5% 1/4W		
Q706	8-729-119-78	TRANSISTOR	2SC2785-HFE	R733	1-249-429-11 CARBON	10K 5% 1/4W		
Q707	8-729-119-78	TRANSISTOR	2SC2785-HFE	R734	1-249-422-11 CARBON	2.7K 5% 1/4W		
Q708	8-729-119-78	TRANSISTOR	2SC2785-HFE	R735	1-249-424-11 CARBON	3.9K 5% 1/4W		
When indicating parts by reference number, please include the board name.								

CONTROL SW

DRUM DRIVE

Ref. No.	Part No.	Description	Remarks			Ref. No.	Part No.	Description	Remarks		
R753	1-249-437-11	CARBON	47K	5%	1/4W				< CRYSTAL >		
R754	1-249-437-11	CARBON	47K	5%	1/4W	X701	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	*****		
R755	1-249-437-11	CARBON	47K	5%	1/4W				*****		
R756	1-249-437-11	CARBON	47K	5%	1/4W				*****		
R757	1-249-437-11	CARBON	47K	5%	1/4W				*****		
R758	1-249-437-11	CARBON	47K	5%	1/4W				* A-2056-488-A DRUM DRIVE BOARD, COMPLETE		
R759	1-249-437-11	CARBON	47K	5%	1/4W				*****		
R760	1-249-437-11	CARBON	47K	5%	1/4W				* 3-343-491-01 HOLDER (S SENSOR B)		
R761	1-249-437-11	CARBON	47K	5%	1/4W				4-870-539-00 PLATE, GROUND		
R762	1-249-437-11	CARBON	47K	5%	1/4W				*****		
R763	1-249-437-11	CARBON	47K	5%	1/4W				< CAPACITOR >		
R765	1-249-437-11	CARBON	47K	5%	1/4W	C01	1-124-584-00	ELECT	100uF	20%	10V
R770	1-249-417-11	CARBON	1K	5%	1/4W	C02	1-126-157-11	ELECT	10uF	20%	16V
						C03	1-124-257-00	ELECT	2.2uF	20%	50V
						C04	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
						C05	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
						C08	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
						C21	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
						C31	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
									< CONNECTOR >		
S704	1-554-937-11	SWITCH, KEY BOARD (CLOCK SET)				CN01	* 1-564-704-11	PIN, CONNECTOR (SMALL TYPE)	2P		
S705	1-554-937-11	SWITCH, KEY BOARD (SKIP ID WRITE)				CN02	* 1-564-704-11	PIN, CONNECTOR (SMALL TYPE)	2P		
S706	1-554-937-11	SWITCH, KEY BOARD (SKIP ID ERASE)				CN03	* 1-564-338-00	PIN, CONNECTOR 4P			
S707	1-554-937-11	SWITCH, KEY BOARD (7)				CN04	* 1-564-336-00	PIN, CONNECTOR 2P			
S708	1-554-937-11	SWITCH, KEY BOARD (8)				CN05	* 1-564-336-61	PIN, CONNECTOR 2P			
S709	1-554-937-11	SWITCH, KEY BOARD (9)				CN06	* 1-564-339-00	PIN, CONNECTOR 5P			
S710	1-554-937-11	SWITCH, KEY BOARD (START ID WRITE)				CN07	1-564-721-11	PIN, CONNECTOR (SMALL TYPE)	5P		
S711	1-554-937-11	SWITCH, KEY BOARD (START ID ERASE)				CN08	* 1-568-872-11	SOCKET, CONNECTOR 30P			
S712	1-554-937-11	SWITCH, KEY BOARD (4)				CN09	* 1-564-706-11	PIN, CONNECTOR (SMALL TYPE)	4P		
S713	1-554-937-11	SWITCH, KEY BOARD (5)				CN10	* 1-564-719-11	PIN, CONNECTOR (SMALL TYPE)	3P		
S714	1-554-937-11	SWITCH, KEY BOARD (6)							< IC >		
S715	1-554-937-11	SWITCH, KEY BOARD (START ID AUTO)				IC01	8-759-107-68	IC	CX20115A		
S716	1-554-937-11	SWITCH, KEY BOARD (START ID RENUMBER)				IC02	8-759-502-80	IC	LM358M		
S717	1-554-937-11	SWITCH, KEY BOARD (1)				IC03	8-759-502-80	IC	LM358M		
S718	1-554-937-11	SWITCH, KEY BOARD (2)							< JUMPER >		
S719	1-554-937-11	SWITCH, KEY BOARD (3)				JW06	1-216-296-00	METAL CHIP	0	5%	1/8W
S720	1-554-937-11	SWITCH, KEY BOARD (RECORDED)				JW07	1-216-296-00	METAL CHIP	0	5%	1/8W
S721	1-554-937-11	SWITCH, KEY BOARD (PRESENT)				JW08	1-216-296-00	METAL CHIP	0	5%	1/8W
S722	1-554-937-11	SWITCH, KEY BOARD (FADER)				JW09	1-216-296-00	METAL CHIP	0	5%	1/8W
S723	1-554-937-11	SWITCH, KEY BOARD (MARGIN RESET)				JW10	1-216-296-00	METAL CHIP	0	5%	1/8W
S724	1-554-937-11	SWITCH, KEY BOARD (COUNTER RESET)							< JUMPER >		
S725	1-554-937-11	SWITCH, KEY BOARD (COUNTER MODE)				JW11	1-216-296-00	METAL CHIP	0	5%	1/8W
S726	1-554-937-11	SWITCH, KEY BOARD (REW <<)				JW12	1-216-296-00	METAL CHIP	0	5%	1/8W
S727	1-554-937-11	SWITCH, KEY BOARD (FF >>)				JW13	1-216-296-00	METAL CHIP	0	5%	1/8W
S728	1-554-937-11	SWITCH, KEY BOARD (REC O)				JW14	1-216-296-00	METAL CHIP	0	5%	1/8W
S729	1-554-937-11	SWITCH, KEY BOARD (PAUSE パス)				JW15	1-216-296-00	METAL CHIP	0	5%	1/8W
S730	1-554-937-11	SWITCH, KEY BOARD (REC MUTE O)				JW16	1-216-296-00	METAL CHIP	0	5%	1/8W
S731	1-554-937-11	SWITCH, KEY BOARD (O/C ハン)				JW17	1-216-296-00	METAL CHIP	0	5%	1/8W
S732	1-554-937-11	SWITCH, KEY BOARD (STOP □)				JW18	1-216-296-00	METAL CHIP	0	5%	1/8W
S733	1-554-937-11	SWITCH, KEY BOARD (PLAY ▶)				JW19	1-216-296-00	METAL CHIP	0	5%	1/8W
S734	1-554-937-11	SWITCH, KEY BOARD (PREV <<)							When indicating parts by reference number, please include the board name.		
S735	1-554-937-11	SWITCH, KEY BOARD (NEXT >>)									
S736	1-554-937-11	SWITCH, KEY BOARD (END ID WRITE)									
S737	1-554-937-11	SWITCH, KEY BOARD (END ID ERASE)									
S738	1-554-937-11	SWITCH, KEY BOARD (CLEAR)									
S739	1-554-937-11	SWITCH, KEY BOARD (O -)									
S740	1-554-937-11	SWITCH, KEY BOARD (MUSIC SCAN +)									

DRUM DRIVE **HEADPHONE** **INPUT SW**

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
JW20	1-216-296-00	METAL CHIP	0 5% 1/8W	C181	1-126-059-11	ELECT	10uF 20% 63V
JW21	1-216-296-00	METAL CHIP	0 5% 1/8W	C280	1-162-290-31	CERAMIC	470PF 10% 50V
JW22	1-216-296-00	METAL CHIP	0 5% 1/8W	C281	1-126-059-11	ELECT	10uF 20% 63V
JW23	1-216-296-00	METAL CHIP	0 5% 1/8W	C451	1-126-024-11	ELECT	220uF 20% 25V
JW24	1-216-296-00	METAL CHIP	0 5% 1/8W	C452	1-126-024-11	ELECT	220uF 20% 25V
JW25	1-216-296-00	METAL CHIP	0 5% 1/8W				< CONNECTOR >
JW26	1-216-296-00	METAL CHIP	0 5% 1/8W				CNP701 * 1-566-910-11 HOUSING, CONNECTOR 3P
JW27	1-216-296-00	METAL CHIP	0 5% 1/8W				< DIODE >
JW28	1-216-296-00	METAL CHIP	0 5% 1/8W	D401	8-719-200-82	DIODE	11ES2
JW29	1-216-296-00	METAL CHIP	0 5% 1/8W	D402	8-719-200-82	DIODE	11ES2
JW30	1-216-296-00	METAL CHIP	0 5% 1/8W				< PHOTO INTERRUPTER >
PH01	8-719-939-23	DIODE	GP-2S09-C				< IC >
PH02	8-719-939-23	DIODE	GP-2S09-C				IC401 8-759-981-98 IC RC4560D-D
							< JACK >
Q01	8-729-100-66	TRANSISTOR	2SC1623				J161 1-565-327-11 JACK, LARGE TYPE 1P (HEADPHONE)
Q02	8-729-101-07	TRANSISTOR	2SB798-DL				
							< RESISTOR >
R01	1-216-061-00	METAL CHIP	3.3K 5% 1/10W	R128	1-259-468-11	CARBON	47K 5% 1/6W
R02	1-216-075-00	METAL CHIP	12K 5% 1/10W	R129	1-259-444-11	CARBON	4.7K 5% 1/6W
R03	1-216-029-00	METAL CHIP	150 5% 1/10W	R130	1-259-468-11	CARBON	47K 5% 1/6W
R04	1-216-059-00	METAL CHIP	2.7K 5% 1/10W	R131	1-259-412-11	CARBON	220 5% 1/6W
R05	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R228	1-259-468-11	CARBON	47K 5% 1/6W
R06	1-216-085-00	METAL CHIP	33K 5% 1/10W	R229	1-259-444-11	CARBON	4.7K 5% 1/6W
R07	1-216-025-00	METAL CHIP	100 5% 1/10W	R230	1-259-468-11	CARBON	47K 5% 1/6W
R08	1-216-049-00	METAL CHIP	1K 5% 1/10W	R231	1-259-412-11	CARBON	220 5% 1/6W
R09	1-216-073-00	METAL CHIP	10K 5% 1/10W	R460	△ 1-212-857-00	FUSIBLE	10 5% 1/4W F
R10	1-216-073-00	METAL CHIP	10K 5% 1/10W	R461	△ 1-212-857-00	FUSIBLE	10 5% 1/4W F
R11	1-216-073-00	METAL CHIP	10K 5% 1/10W	R799	1-249-437-11	CARBON	47K 5% 1/4W
R12	1-216-089-00	METAL CHIP	47K 5% 1/10W				< VARIABLE RESISTOR >
R13	1-216-073-00	METAL CHIP	10K 5% 1/10W				
R14	1-216-037-00	METAL CHIP	330 5% 1/10W	RV103	1-241-537-11	RES, VAR, CARBON	20K/20K (PHONE LEVEL)
R21	1-216-073-00	METAL CHIP	10K 5% 1/10W				
R22	1-216-081-00	METAL CHIP	22K 5% 1/10W				
R23	1-216-077-00	METAL CHIP	15K 5% 1/10W				*****
R24	1-216-067-00	METAL CHIP	5.6K 5% 1/10W				* 1-639-328-11 INPUT SW BOARD
R25	1-216-103-00	METAL CHIP	180K 5% 1/10W				*****
R26	1-216-065-00	METAL CHIP	4.7K 5% 1/10W				
R31	1-216-073-00	METAL CHIP	10K 5% 1/10W				< CONNECTOR >
R32	1-216-081-00	METAL CHIP	22K 5% 1/10W				
R35	1-216-103-00	METAL CHIP	180K 5% 1/10W				CN772 * 1-564-336-00 PIN, CONNECTOR 2P
R36	1-216-065-00	METAL CHIP	4.7K 5% 1/10W				CNP702 * 1-566-910-11 HOUSING, CONNECTOR 3P
							< RESISTOR >

* 1-639-327-11 HEADPHONE BOARD *****				R713	1-249-428-11	CARBON	8.2K 5% 1/4W
				R714	1-249-434-11	CARBON	27K 5% 1/4W
< CAPACITOR >							< SWITCH >
C180	1-162-290-31	CERAMIC	470PF 10% 50V	S702	1-572-758-11	SWITCH, ROTARY (INPUT)	

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks	
	A-2006-648-A	MAIN BOARD, COMPLETE		C325	1-126-022-11	ELECT	47uF 20%	
		*****		C326	1-162-201-31	CERAMIC	12PF 5%	
		< CAPACITOR >		C327	1-162-201-31	CERAMIC	12PF 5%	
				C328	1-124-903-11	ELECT	1uF 20%	
				C329	1-162-294-31	CERAMIC	0.001uF 10%	
C102	1-126-233-11	ELECT	22uF 20%	50V	C330	1-162-294-31	CERAMIC	0.001uF 10%
C103	1-130-955-00	FILM	0.01uF 5%	100V	C331	1-162-294-31	CERAMIC	0.001uF 10%
C110	1-136-439-11	FILM	330PF 5%	630V	C345	1-162-201-31	CERAMIC	12PF 5%
C111	1-136-439-11	FILM	330PF 5%	630V	C346	1-162-199-31	CERAMIC	10PF 5%
C112	1-136-437-11	FILM	220PF 5%	630V	C347	1-162-294-31	CERAMIC	0.001uF 10%
C113	1-136-437-11	FILM	220PF 5%	630V	C362	1-126-043-11	ELECT	0.47uF 20%
C114	1-136-433-11	FILM	100PF 5%	630V	C363	1-126-059-11	ELECT	10uF 20%
C115	1-136-433-11	FILM	100PF 5%	630V	C390	1-162-215-31	CERAMIC	47PF 5%
C116	1-136-230-00	FILM	0.0022uF 5%	100V	C391	1-162-215-31	CERAMIC	47PF 5%
C117	1-136-228-11	FILM	0.0012uF 5%	100V	C401	1-136-165-00	FILM	0.1uF 5%
C118	1-136-233-11	FILM	0.0047uF 5%	100V	C402	1-136-165-00	FILM	0.1uF 5%
C120	1-124-122-11	ELECT	100uF 20%	50V	C403	1-136-165-00	FILM	0.1uF 5%
C202	1-126-233-11	ELECT	22uF 20%	50V	C404	1-136-165-00	FILM	0.1uF 5%
C203	1-130-955-00	FILM	0.01uF 5%	100V	C405	1-136-165-00	FILM	0.1uF 5%
C210	1-136-439-11	FILM	330PF 5%	630V	C406	1-126-058-11	ELECT	4.7uF 20%
C211	1-136-439-11	FILM	330PF 5%	630V	C407	1-136-165-00	FILM	0.1uF 5%
C212	1-136-437-11	FILM	220PF 5%	630V	C408	1-136-165-00	FILM	0.1uF 5%
C213	1-136-437-11	FILM	220PF 5%	630V	C409	1-126-104-11	ELECT	470uF 20%
C214	1-136-433-11	FILM	100PF 5%	630V	C410	1-136-165-00	FILM	0.1uF 5%
C215	1-136-433-11	FILM	100PF 5%	630V	C411	1-126-104-11	ELECT	470uF 20%
C216	1-136-230-00	FILM	0.0022uF 5%	100V	C412	1-136-165-00	FILM	0.1uF 5%
C217	1-136-228-11	FILM	0.0012uF 5%	100V	C413	1-126-104-11	ELECT	470uF 20%
C218	1-136-233-11	FILM	0.0047uF 5%	100V	C414	1-126-104-11	ELECT	470uF 20%
C220	1-124-122-11	ELECT	100uF 20%	50V	C415	1-136-165-00	FILM	0.1uF 5%
C300	1-162-294-31	CERAMIC	0.001uF 10%	50V	C416	1-136-165-00	FILM	0.1uF 5%
C301	1-130-834-00	FILM	1uF 10%	63V	C417	1-164-159-11	CERAMIC	0.1uF 5%
C302	1-164-159-11	CERAMIC	0.1uF 5%	50V	C418	1-136-165-00	FILM	0.1uF 5%
C303	1-162-211-31	CERAMIC	33PF 5%	50V	C419	1-136-165-00	FILM	0.1uF 5%
C304	1-126-059-11	ELECT	10uF 20%	63V	C420	1-136-165-00	FILM	0.1uF 5%
C305	1-136-153-00	FILM	0.01uF 5%	50V	C421	1-136-165-00	FILM	0.1uF 5%
C307	1-126-022-11	ELECT	47uF 20%	10V	C422	1-126-023-11	ELECT	100uF 20%
C308	1-164-159-11	CERAMIC	0.1uF 5%	50V	C423	1-126-023-11	ELECT	100uF 20%
C309	1-124-983-11	ELECT	330uF 20%	6.3V	C424	1-136-165-00	FILM	0.1uF 5%
C310	1-130-834-00	FILM	1uF 10%	63V	C425	1-126-104-11	ELECT	470uF 20%
C311	1-162-279-31	CERAMIC	75PF 10%	50V	C426	1-136-165-00	FILM	0.1uF 5%
C312	1-126-022-11	ELECT	47uF 20%	10V	C427	1-136-165-00	FILM	0.1uF 5%
C313	1-126-023-11	ELECT	100uF 20%	25V	C428	1-136-165-00	FILM	0.1uF 5%
C314	1-162-199-31	CERAMIC	10PF 5%	50V	C429	1-136-165-00	FILM	0.1uF 5%
C315	1-162-294-31	CERAMIC	0.001uF 10%	50V	C430	1-126-059-11	ELECT	10uF 20%
C316	1-162-199-31	CERAMIC	10PF 5%	50V	C431	1-126-059-11	ELECT	10uF 20%
C317	1-162-201-31	CERAMIC	12PF 5%	50V	C432	1-124-273-00	ELECT	3.3uF 20%
C318	1-162-201-31	CERAMIC	12PF 5%	50V	C435	1-126-023-11	ELECT	100uF 20%
C319	1-164-159-11	CERAMIC	0.1uF 5%	50V	C436	1-126-023-11	ELECT	100uF 20%
C320	1-130-834-00	FILM	1uF 10%	63V	C437	1-124-997-11	ELECT	470uF 20% 6.3V
C321	1-136-165-00	FILM	0.1uF 5%	50V	C438	1-124-997-11	ELECT	470uF 20% 6.3V
C322	1-164-159-11	CERAMIC	0.1uF 5%	50V	C439	1-164-159-11	CERAMIC	0.1uF 50V
C323	1-162-206-31	CERAMIC	20PF 5%	50V	C440	1-124-983-11	ELECT	330uF 20% 6.3V
C324	1-164-159-11	CERAMIC	0.1uF 5%	50V				

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MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks		
C441	1-164-159-11	CERAMIC	0.1uF	50V	IC303	8-759-917-18	IC SN74HCU04N		
C442	1-164-159-11	CERAMIC	0.1uF	50V	IC304	8-759-135-80	IC uPC358C		
C444	1-164-159-11	CERAMIC	0.1uF	50V	IC305	8-759-926-17	IC SN74HC153ANS		
C445	1-164-159-11	CERAMIC	0.1uF	50V	IC306	8-759-947-57	IC CXD1136Q		
C446	1-164-159-11	CERAMIC	0.1uF	50V	IC307	8-752-339-43	IC CXD2601AQ		
C447	1-164-159-11	CERAMIC	0.1uF	50V	IC308	8-759-906-24	IC SN74LS624N		
C448	1-164-159-11	CERAMIC	0.1uF	50V	IC309	8-759-925-90	IC SN74HC74ANS		
C449	1-164-159-11	CERAMIC	0.1uF	50V	IC310	8-752-337-80	IC CXK58257AM-12L		
C450	1-136-165-00	FILM	0.1uF	5%	IC311	8-752-832-76	IC CXP80524-046Q		
C451	1-136-165-00	FILM	0.1uF	5%	IC312	8-752-832-75	IC CXP80524-045Q		
C452	1-162-179-11	CERAMIC	0.1uF	50V	IC319	8-759-633-65	IC M54641L		
C460	1-164-159-11	CERAMIC	0.1uF	50V	IC320	8-759-633-65	IC M54641L		
C461	1-164-159-11	CERAMIC	0.1uF	50V	IC321	8-759-971-12	IC PST529E		
C462	1-164-159-11	CERAMIC	0.1uF	50V	IC322	8-759-231-53	IC TA7805S		
					IC330	8-759-984-34	IC RP5C62		
< CONNECTOR >									
CN104	* 1-564-507-11	PLUG, CONNECTOR 4P		IC333	8-759-917-18	IC SN74HCU04N			
CN105	* 1-564-507-11	PLUG, CONNECTOR 4P		IC354	8-759-900-72	IC NE5532P			
CN107	* 1-564-509-11	PLUG, CONNECTOR 6P		IC355	8-759-900-72	IC NE5532P			
CN301	* 1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P		IC356	8-759-945-58	IC RC4558P			
CN308	* 1-564-339-00	PIN, CONNECTOR 5P		IC357	8-759-231-53	IC TA7805S			
CN333	* 1-564-514-11	PLUG, CONNECTOR 11P		IC358	8-759-245-79	IC TA7905S			
CN398	* 1-564-336-00	PIN, CONNECTOR 2P		IC359	8-759-504-36	IC AK5339			
CN501	* 1-564-716-11	PIN, CONNECTOR (SMALL TYPE) 14P		IC360	8-759-972-47	IC LF412CN			
CN508	* 1-568-933-11	SOCKET, CONNECTOR 30P		IC361	8-759-602-83	IC M5238P			
CN557	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P		IC362	8-752-344-10	IC CXD2561M-1			
CN571	* 1-568-829-11	SOCKET, CONNECTOR 10P		IC363	8-752-342-65	IC CXD2560M			
CN572	* 1-568-825-11	SOCKET, CONNECTOR 6P		IC374	8-759-634-55	IC M5F7805L-720			
CN576	* 1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P		IC375	8-759-900-72	IC NE5532P			
				IC376	8-759-900-72	IC NE5532P			
< TRIMMER >									
CT301	1-141-334-11	CAP, VAR, TRIMMER		IC431	8-759-925-78	IC TC74HC10F			
				IC432	8-759-995-76	IC PST529C			
< DIODE >									
D101	8-719-107-94	DIODE	1SS202-1	J181	1-565-406-41	JACK, PIN 1P (DIGITAL OUT)			
D102	8-719-107-94	DIODE	1SS202-1	J191	1-568-750-21	JACK, PIN (1P SHIELD TYPE) (DIGITAL IN)			
D201	8-719-107-94	DIODE	1SS202-1						
D202	8-719-107-94	DIODE	1SS202-1	< COIL >					
D306	8-719-200-82	DIODE	11ES2	L302	1-410-498-11	INDUCTOR	1.2uH		
D307	8-719-107-94	DIODE	1SS202-1	L303	1-410-509-11	INDUCTOR	10uH		
D308	8-719-107-94	DIODE	1SS202-1	L305	1-410-509-11	INDUCTOR	10uH		
D314	8-719-200-82	DIODE	11ES2	L306	1-410-509-11	INDUCTOR	10uH		
D321	8-719-107-94	DIODE	1SS202-1	L310	1-410-953-11	INDUCTOR, SMALL TYPE			
D322	8-719-911-06	DIODE	1SS106	L311	1-410-397-21	FERRITE BEAD INDUCTOR	1.1uH		
D323	8-719-107-94	DIODE	1SS202-1	L312	1-410-397-21	FERRITE BEAD INDUCTOR	1.1uH		
D324	8-719-911-06	DIODE	1SS106						
D403	8-719-107-94	DIODE	1SS202-1	< TRANSISTOR >					
D404	8-719-210-21	DIODE	11EQS04	Q301	8-729-927-11	TRANSISTOR	2SA1585QR		
				Q311	8-729-900-80	TRANSISTOR	DTC114ES		
< IC >									
IC301	8-759-917-18	IC	SN74HCU04N	Q312	8-729-107-85	TRANSISTOR	2SC3623A-K		
IC302	8-759-232-49	IC	TC74HC132AP	Q313	8-729-900-61	TRANSISTOR	DTA114ES		
				Q318	8-729-900-80	TRANSISTOR	DTC114ES		
				Q319	8-729-900-80	TRANSISTOR	DTC114ES		

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MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
Q320	8-729-927-11	TRANSISTOR	2SA1585SQR	R212	1-249-425-11	CARBON	4.7K 5% 1/4W
Q321	8-729-927-12	TRANSISTOR	2SC4115SQR	R213	1-249-425-11	CARBON	4.7K 5% 1/4W
Q343	8-729-920-68	TRANSISTOR	2SA933S-QR	R214	1-249-425-11	CARBON	4.7K 5% 1/4W
Q390	8-729-904-36	TRANSISTOR	DTC114YS	R215	1-249-430-11	CARBON	12K 5% 1/4W
Q399	8-729-900-80	TRANSISTOR	DTC114ES	R216	1-249-430-11	CARBON	12K 5% 1/4W
Q432	8-729-900-80	TRANSISTOR	DTC114ES	R217	1-249-426-11	CARBON	5.6K 5% 1/4W
Q433	8-729-107-85	TRANSISTOR	2SC3623A-K	R218	1-249-426-11	CARBON	5.6K 5% 1/4W
Q434	8-729-107-85	TRANSISTOR	2SC3623A-K	R219	1-249-426-11	CARBON	5.6K 5% 1/4W
Q435	8-729-900-61	TRANSISTOR	DTA114ES	R220	1-249-426-11	CARBON	5.6K 5% 1/4W
Q436	8-729-900-80	TRANSISTOR	DTC114ES	R221	1-249-405-11	CARBON	100 5% 1/4W
Q437	8-729-900-61	TRANSISTOR	DTA114ES	R222	1-249-419-11	CARBON	1.5K 5% 1/4W
Q438	8-729-900-80	TRANSISTOR	DTC114ES	R223	1-249-419-11	CARBON	1.5K 5% 1/4W
Q439	8-729-900-80	TRANSISTOR	DTC114ES	R224	1-249-441-11	CARBON	100K 5% 1/4W
Q440	8-729-119-78	TRANSISTOR	2SC2785-HFE	R225	1-249-409-11	CARBON	220 5% 1/4W
< RESISTOR >				R226	1-249-429-11	CARBON	10K 5% 1/4W
R102	1-247-903-00	CARBON	1M 5% 1/4W	R280	1-249-397-11	CARBON	22 5% 1/4W
R103	1-249-417-11	CARBON	1K 5% 1/4W	R301	1-247-804-11	CARBON	75 5% 1/4W
R104	1-249-433-11	CARBON	22K 5% 1/4W	R302	1-249-437-11	CARBON	47K 5% 1/4W
R105	1-249-435-11	CARBON	33K 5% 1/4W	R303	1-249-421-11	CARBON	2.2K 5% 1/4W
R106	1-249-403-11	CARBON	68 5% 1/4W	R304	1-249-441-11	CARBON	100K 5% 1/4W
R107	1-247-854-11	CARBON	9.1K 5% 1/4W	R305	1-249-421-11	CARBON	2.2K 5% 1/4W
R108	1-247-854-11	CARBON	9.1K 5% 1/4W	R306	1-249-417-11	CARBON	1K 5% 1/4W
R109	1-247-854-11	CARBON	9.1K 5% 1/4W	R307	1-249-417-11	CARBON	1K 5% 1/4W
R110	1-247-854-11	CARBON	9.1K 5% 1/4W	R308	1-249-425-11	CARBON	4.7K 5% 1/4W
R111	1-249-425-11	CARBON	4.7K 5% 1/4W	R309	1-249-421-11	CARBON	2.2K 5% 1/4W
R112	1-249-425-11	CARBON	4.7K 5% 1/4W	R310	1-249-441-11	CARBON	100K 5% 1/4W
R113	1-249-425-11	CARBON	4.7K 5% 1/4W	R311	1-249-429-11	CARBON	10K 5% 1/4W
R114	1-249-425-11	CARBON	4.7K 5% 1/4W	R312	1-249-421-11	CARBON	2.2K 5% 1/4W
R115	1-249-430-11	CARBON	12K 5% 1/4W	R313	1-249-421-11	CARBON	2.2K 5% 1/4W
R116	1-249-430-11	CARBON	12K 5% 1/4W	R314	1-249-435-11	CARBON	33K 5% 1/4W
R117	1-249-426-11	CARBON	5.6K 5% 1/4W	R315	1-249-429-11	CARBON	10K 5% 1/4W
R118	1-249-426-11	CARBON	5.6K 5% 1/4W	R316	1-247-804-11	CARBON	75 5% 1/4W
R119	1-249-426-11	CARBON	5.6K 5% 1/4W	R317	1-249-405-11	CARBON	100 5% 1/4W
R120	1-249-426-11	CARBON	5.6K 5% 1/4W	R318	1-249-409-11	CARBON	220 5% 1/4W
R121	1-249-405-11	CARBON	100 5% 1/4W	R319	1-249-409-11	CARBON	220 5% 1/4W
R122	1-249-419-11	CARBON	1.5K 5% 1/4W	R320	1-247-804-11	CARBON	75 5% 1/4W
R123	1-249-419-11	CARBON	1.5K 5% 1/4W	R321	1-249-405-11	CARBON	100 5% 1/4W
R124	1-249-441-11	CARBON	100K 5% 1/4W	R322	1-249-429-11	CARBON	10K 5% 1/4W
R125	1-249-409-11	CARBON	220 5% 1/4W	R323	1-249-433-11	CARBON	22K 5% 1/4W
R126	1-249-429-11	CARBON	10K 5% 1/4W	R324	1-249-433-11	CARBON	22K 5% 1/4W
R180	1-249-397-11	CARBON	22 5% 1/4W	R325	1-249-425-11	CARBON	4.7K 5% 1/4W
R202	1-247-903-00	CARBON	1M 5% 1/4W	R326	1-249-409-11	CARBON	220 5% 1/4W
R203	1-249-417-11	CARBON	1K 5% 1/4W	R327	1-249-425-11	CARBON	4.7K 5% 1/4W
R204	1-249-433-11	CARBON	22K 5% 1/4W	R328	1-249-417-11	CARBON	1K 5% 1/4W
R205	1-249-435-11	CARBON	33K 5% 1/4W	R329	1-249-413-11	CARBON	470 5% 1/4W
R206	1-249-403-11	CARBON	68 5% 1/4W	R330	1-249-417-11	CARBON	1K 5% 1/4W
R207	1-247-854-11	CARBON	9.1K 5% 1/4W	R331	1-249-429-11	CARBON	10K 5% 1/4W
R208	1-247-854-11	CARBON	9.1K 5% 1/4W	R332	1-249-429-11	CARBON	10K 5% 1/4W
R209	1-247-854-11	CARBON	9.1K 5% 1/4W	R333	1-249-433-11	CARBON	22K 5% 1/4W
R210	1-247-854-11	CARBON	9.1K 5% 1/4W	R334	1-249-425-11	CARBON	4.7K 5% 1/4W
R211	1-249-425-11	CARBON	4.7K 5% 1/4W	R335	1-249-425-11	CARBON	4.7K 5% 1/4W
				R336	1-249-425-11	CARBON	4.7K 5% 1/4W

When indicating parts by reference number, please include the board name.

MAIN **MOTOR**

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R346	1-249-441-11	CARBON	100K 5% 1/4W	R430	1-249-399-11	CARBON	33 5% 1/4W
R347	1-249-441-11	CARBON	100K 5% 1/4W	R431	1-249-399-11	CARBON	33 5% 1/4W
R348	1-249-441-11	CARBON	100K 5% 1/4W	R432	1-249-393-11	CARBON	10 5% 1/4W
R349	1-249-441-11	CARBON	100K 5% 1/4W	R433	1-216-349-00	CARBON	1 5% 1/2W
R350	1-249-425-11	CARBON	4.7K 5% 1/4W	R434	1-249-409-11	CARBON	220 5% 1/4W
R351	1-249-425-11	CARBON	4.7K 5% 1/4W	R435	1-249-409-11	CARBON	220 5% 1/4W
R353	1-249-441-11	CARBON	100K 5% 1/4W	R436	1-249-409-11	CARBON	220 5% 1/4W
R365	1-249-425-11	CARBON	4.7K 5% 1/4W	R437	1-249-409-11	CARBON	220 5% 1/4W
R370	1-247-738-11	CARBON	82 5% 1/2W	R438	1-249-409-11	CARBON	220 5% 1/4W
R378	1-249-417-11	CARBON	1K 5% 1/4W	R439	1-249-437-11	CARBON	47K 5% 1/4W
R379	1-249-401-11	CARBON	47 5% 1/4W	R440	1-249-441-11	CARBON	100K 5% 1/4W
R380	1-249-411-11	CARBON	330 5% 1/4W	R441	1-249-441-11	CARBON	100K 5% 1/4W
R381	△ 1-215-881-11	METAL OXIDE	15 5% 2W F	R442	1-249-441-11	CARBON	100K 5% 1/4W
R386	1-249-405-11	CARBON	100 5% 1/4W	R443	1-249-437-11	CARBON	47K 5% 1/4W
R387	1-249-405-11	CARBON	100 5% 1/4W	R444	1-249-417-11	CARBON	1K 5% 1/4W
R388	1-249-423-11	CARBON	3.3K 5% 1/4W	R445	1-249-419-11	CARBON	1.5K 5% 1/4W
R389	1-249-423-11	CARBON	3.3K 5% 1/4W	R446	1-247-883-00	CARBON	150K 5% 1/4W
R390	1-249-423-11	CARBON	3.3K 5% 1/4W	R447	1-249-425-11	CARBON	4.7K 5% 1/4W
R391	1-249-423-11	CARBON	3.3K 5% 1/4W	R448	1-249-413-11	CARBON	470 5% 1/4W
R392	1-249-430-11	CARBON	12K 5% 1/4W	R449	1-249-424-11	CARBON	3.9K 5% 1/4W
R393	1-247-864-11	CARBON	24K 5% 1/4W	R451	1-247-891-00	CARBON	330K 5% 1/4W
R394	1-249-429-11	CARBON	10K 5% 1/4W	R460	1-249-429-11	CARBON	10K 5% 1/4W
R395	1-249-425-11	CARBON	4.7K 5% 1/4W	R470	1-247-903-00	CARBON	1M 5% 1/4W
R396	1-249-441-11	CARBON	100K 5% 1/4W	R480	1-247-903-00	CARBON	1M 5% 1/4W
R397	1-249-441-11	CARBON	100K 5% 1/4W	R495	1-249-417-11	CARBON	1K 5% 1/4W
R398	1-249-441-11	CARBON	100K 5% 1/4W	R496	1-249-417-11	CARBON	1K 5% 1/4W
R399	1-249-441-11	CARBON	100K 5% 1/4W	R497	1-247-903-00	CARBON	1M 5% 1/4W
R400	1-249-441-11	CARBON	100K 5% 1/4W	R498	1-247-903-00	CARBON	1M 5% 1/4W
R401	1-249-441-11	CARBON	100K 5% 1/4W	R499	1-249-429-11	CARBON	10K 5% 1/4W
R402	1-249-441-11	CARBON	100K 5% 1/4W				
R403	1-249-441-11	CARBON	100K 5% 1/4W				
R404	1-249-441-11	CARBON	100K 5% 1/4W	RY301	1-515-726-11	RELAY	
R405	1-249-441-11	CARBON	100K 5% 1/4W				
R406	1-249-429-11	CARBON	10K 5% 1/4W				
R407	1-249-429-11	CARBON	10K 5% 1/4W				
R408	1-249-429-11	CARBON	10K 5% 1/4W	T301	1-459-795-11	COIL (WITH CORE)	
R409	1-249-425-11	CARBON	4.7K 5% 1/4W				
R410	1-249-425-11	CARBON	4.7K 5% 1/4W				
R411	1-249-417-11	CARBON	1K 5% 1/4W	X301	1-567-816-11	VIBRATOR, CRYSTAL (18.816MHz)	
R412	1-249-441-11	CARBON	100K 5% 1/4W	X302	1-567-815-11	VIBRATOR, CRYSTAL (22.5792MHz)	
R413	1-249-437-11	CARBON	47K 5% 1/4W	X303	1-578-667-11	VIBRATOR, CRYSTAL (49.152MHz)	
R414	1-249-413-11	CARBON	470 5% 1/4W	X304	1-567-098-00	OSCILLATOR, CRYSTAL (32.768kHz)	
R415	1-249-437-11	CARBON	47K 5% 1/4W				
R416	1-249-437-11	CARBON	47K 5% 1/4W				
R417	1-249-437-11	CARBON	47K 5% 1/4W				
R418	1-249-413-11	CARBON	470 5% 1/4W				
R419	1-249-413-11	CARBON	470 5% 1/4W				
R420	1-249-413-11	CARBON	470 5% 1/4W				
R421	1-249-413-11	CARBON	470 5% 1/4W				
R422	1-249-413-11	CARBON	470 5% 1/4W				
R424	1-249-411-11	CARBON	330 5% 1/4W				
R425	1-249-411-11	CARBON	330 5% 1/4W				
				CN01	* 1-564-336-00	PIN, CONNECTOR 2P	

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Replace only with part number specified.

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Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

MOTOR	PLL	POWER
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Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
CN02	* 1-564-336-61	PIN, CONNECTOR 2P					
CN03	* 1-564-498-11	PIN, CONNECTOR 5P					
			⟨ MOTOR ⟩				
M901	A-2003-448-A	MOTOR ASSY (CASSETTE COMPARTMENT)					

	* 1-639-920-11	PLL BOARD	*****				
	1-543-563-11	FERRITE BOARD, MULTI HOLE					
			⟨ CAPACITOR ⟩				
C501	1-136-153-00	FILM	0.01uF	5%	50V		
C502	1-162-284-31	CERAMIC	150PF	10%	50V		
C503	1-162-199-31	CERAMIC	10PF	5%	50V		
C504	1-126-023-11	ELECT	100uF	20%	25V		
C505	1-162-211-31	CERAMIC	33PF	5%	50V		
C506	1-162-199-31	CERAMIC	10PF	5%	50V		
C507	1-136-158-00	FILM	0.027uF	5%	50V		
C508	1-136-165-00	FILM	0.1uF	5%	50V		
C509	1-126-023-11	ELECT	100uF	20%	25V		
C510	1-136-165-00	FILM	0.1uF	5%	50V		
C511	1-126-023-11	ELECT	100uF	20%	25V		
C512	1-164-159-11	CERAMIC	0.1uF		50V		
C513	1-126-023-11	ELECT	100uF	20%	25V		
C514	1-136-165-00	FILM	0.1uF	5%	50V		
C515	1-130-834-00	FILM	1uF	10%	63V		
C516	1-136-165-00	FILM	0.1uF	5%	50V		
C517	1-164-159-11	CERAMIC	0.1uF		50V		
C520	1-164-159-11	CERAMIC	0.1uF		50V		
			⟨ CONNECTOR ⟩				
CN558	* 1-573-299-11	CONNECTOR, BOARD TO BOARD 10P					
			⟨ DIODE ⟩				
D501	8-719-901-59	DIODE	KV1320				
D503	8-719-903-27	DIODE	1SS168				
			⟨ IC ⟩				
IC501	8-759-604-30	IC	M5F7808L				
IC502	8-759-036-44	IC	MC74AC74N				
IC503	8-759-917-11	IC	SN74HC393AN				
IC504	8-759-250-81	IC	TC5081AP				
			⟨ COIL ⟩				
L501	1-460-042-11	COIL (WITH CORE)					
L502	1-410-324-11	INDUCTOR	4.7uH				
L503	1-410-324-11	INDUCTOR	4.7uH				
L504	1-410-324-11	INDUCTOR	4.7uH				
L505	1-460-042-11	COIL (WITH CORE)					
			⟨ CAPACITOR ⟩				
C907	1-126-946-11	ELECT	6800uF	20%	25V		
C908	1-164-159-11	CERAMIC	0.1uF		50V		
C909	1-124-473-11	ELECT	1000uF	20%	10V		
C910	1-164-159-11	CERAMIC	0.1uF		50V		
C911	1-164-159-11	CERAMIC	0.1uF		50V		
C912	1-124-473-11	ELECT	1000uF	20%	10V		
C913	1-126-104-11	ELECT	470uF	20%	35V		
C914	1-126-104-11	ELECT	470uF	20%	35V		
C915	1-126-049-11	ELECT	22uF	20%	50V		
C916	1-126-052-11	ELECT	100uF	20%	50V		
C917	1-136-165-00	FILM	0.1uF	5%	50V		
C918	1-130-834-00	FILM	1uF	10%	63V		
C919	1-136-165-00	FILM	0.1uF	5%	50V		
C920	1-126-129-11	ELECT	6800uF	20%	35V		
C921	1-126-129-11	ELECT	6800uF	20%	35V		
C922	1-164-159-11	CERAMIC	0.1uF		50V		

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When indicating parts by reference number, please include the board name.

POWER	RELAY	PRIMARY	REC VOL	REEL MOTOR	REMOTE
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Ref. No.	Part No.	Description			Remarks	Ref. No.	Part No.	Description			Remarks	
C923	1-164-159-11	CERAMIC	0.1uF		50V		* 1-639-332-11	RELAY BOARD			*****	
C924	1-164-159-11	CERAMIC	0.1uF		50V						*****	
C925	1-164-159-11	CERAMIC	0.1uF		50V						*****	
C926	1-126-105-11	ELECT	1000uF	20%	35V						*****	
C927	1-126-105-11	ELECT	1000uF	20%	35V						*****	
		< CONNECTOR >						* 1-639-333-11 PRIMARY BOARD			*****	
CN905	* 1-560-338-00	PIN, CONNECTOR	7P					* 3-346-266-12 PLATE, GROUND				
CN906	* 1-560-061-00	PIN, CONNECTOR	3P					< CAPACITOR >				
CN931	* 1-564-505-11	PLUG, CONNECTOR	2P									
CN932	* 1-564-511-11	PLUG, CONNECTOR	8P									
CN933	* 1-564-506-11	PLUG, CONNECTOR	3P				C901	△ 1-161-744-00	CERAMIC	0.01uF	400V	
CN981	* 1-564-506-11	PLUG, CONNECTOR	3P				C902	△ 1-161-742-00	CERAMIC	0.0022uF	20%	400V
		< DIODE >					C903	△ 1-161-742-00	CERAMIC	0.0022uF	20%	400V
D905	8-719-312-47	DIODE	RBA-406B				C904	△ 1-161-742-00	CERAMIC	0.0022uF	20%	400V
D906	8-719-107-94	DIODE	ISS202-1				C905	△ 1-161-742-00	CERAMIC	0.0022uF	20%	400V
D907	8-719-200-82	DIODE	11ES2				C906	△ 1-161-744-00	CERAMIC	0.01uF		400V
D908	8-719-200-82	DIODE	11ES2									
D909	8-719-934-15	DIODE	HZS24-3L									
D910	8-719-933-33	DIODE	HZS6A1L									
D911	8-719-230-02	DIODE	30DF2									
D912	8-719-230-02	DIODE	30DF2									
D913	8-719-230-02	DIODE	30DF2									
D914	8-719-230-02	DIODE	30DF2									
D915	8-719-107-94	DIODE	ISS202-1									
D916	8-719-107-94	DIODE	ISS202-1									
		< FUSE >										
F901	△ 1-532-286-00	FUSE, TIME-LAG	(T2.5A) (AEP, UK)									
F901	△ 1-532-744-11	FUSE, GLASS TUBE	(2.5A) (US, CND)									
		< IC >										
IC901	8-759-148-79	IC	uPC2406HF									
IC902	8-759-231-53	IC	TA7805S									
IC903	8-759-231-58	IC	TA7812SL									
IC904	8-759-604-51	IC	M5F7912L									
		< TRANSISTOR >										
Q901	8-729-140-97	TRANSISTOR	2SB734-34									
		< RESISTOR >										
R901	1-249-425-11	CARBON	4.7K	5%	1/4W							
R902	△ 1-212-849-00	FUSIBLE	4.7	5%	1/4W F							
R903	1-249-421-11	CARBON	2.2K	5%	1/4W							
R904	△ 1-212-865-00	FUSIBLE	22	5%	1/4W F							
R905	1-249-433-11	CARBON	22K	5%	1/4W							
		< TRANSFORMER >										
T901	△ 1-450-556-11	TRANSFORMER, POWER	(US, CND)									
T901	△ 1-450-557-11	TRANSFORMER, POWER	(AEP, UK)									
		< ***** >										

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When indicating parts by reference number, please include the board name.

REMOTE	RF AMP	RGN SW	SUB
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Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks							
< CONNECTOR >														
CN809 * 1-564-495-11 PIN, CONNECTOR 2P														
< JACK >														
J806	1-565-327-11	JACK, LARGE TYPE 1P (REMOTE)		< COIL >										
< COIL >														
L801	1-410-509-11	INDUCTOR	10uH	L1	1-408-781-00	INDUCTOR CHIP	22uH							

* A-2001-587-A RF AMP BOARD, COMPLETE														

< CAPACITOR >														
C1	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	R1	1-216-082-00	METAL GLAZE	24K	5%	1/10W			
C2	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	R2	1-216-082-00	METAL GLAZE	24K	5%	1/10W			
C3	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	R3	1-216-066-00	METAL CHIP	5.1K	5%	1/10W			
C4	1-162-638-11	CERAMIC CHIP	1uF		16V	R4	1-216-066-00	METAL CHIP	5.1K	5%	1/10W			
C5	1-164-299-11	CERAMIC CHIP	0.22uF	10%	25V	R5	1-216-077-00	METAL CHIP	15K	5%	1/10W			
C6	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	R6	1-216-077-00	METAL CHIP	15K	5%	1/10W			
C7	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	R7	1-216-077-00	METAL CHIP	15K	5%	1/10W			
C8	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	R8	1-216-079-00	METAL CHIP	18K	5%	1/10W			
C9	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	R9	1-216-075-00	METAL CHIP	12K	5%	1/10W			
C10	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	R10	1-216-079-00	METAL CHIP	18K	5%	1/10W			

C11	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	R11	1-216-077-00	METAL CHIP	15K	5%	1/10W			
C12	1-164-299-11	CERAMIC CHIP	0.22uF	10%	25V	R12	1-216-077-00	METAL CHIP	15K	5%	1/10W			
C13	1-162-638-11	CERAMIC CHIP	1uF		16V	R13	1-216-077-00	METAL CHIP	15K	5%	1/10W			
C14	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	R14	1-216-081-00	METAL CHIP	22K	5%	1/10W			
C15	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	R15	1-216-234-00	METAL GLAZE	33K	5%	1/8W			

< VARIABLE RESISTOR >														
C16	1-163-038-00	CERAMIC CHIP	0.1uF		25V	RV1	1-238-181-11	RES, ADJ, CERMET 4.7K						
C17	1-163-001-11	CERAMIC CHIP	220PF	10%	50V	RV2	1-238-181-11	RES, ADJ, CERMET 4.7K						
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	*****								
C19	1-163-001-11	CERAMIC CHIP	220PF	10%	50V	* 1-639-301-11 RGN SW BOARD								
C20	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V	*****								
C21	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	< SWITCH >								
C22	1-126-603-11	ELECT CHIP	4.7uF	20%	35V	S01	1-571-878-11	SWITCH, PUSH (2 KEY)						
C23	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	*****								
C24	1-163-038-00	CERAMIC CHIP	0.1uF		25V	* A-2006-553-A SUB BOARD, COMPLETE								
C25	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	*****								
C26	1-163-038-00	CERAMIC CHIP	0.1uF		25V	< BATTERY >								
C27	1-162-638-11	CERAMIC CHIP	1uF		16V	BAT301△ 1-528-229-11	BATTERY, LITHIUM (CR-2450)							
C28	1-164-505-11	CERAMIC CHIP	2.2uF		16V	< CAPACITOR >								
< CONNECTOR >														
CN51	* 1-566-207-11	PIN, CONNECTOR (PC BOARD) 14P				C332	1-136-153-00	FILM	0.01uF	5%	50V			
CN52	* 1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P				C333	1-130-473-00	MYLAR	0.0015uF	5%	50V			
< IC >														
IC1	8-752-039-01	IC CXA1364R				C334	1-136-158-00	FILM	0.027uF	5%	50V			
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When indicating parts by reference number, please include the board name.

TOP END SENSOR

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
< DIODE >							
D01	8-719-951-03	DIODE GL-453		#1	7-682-548-09	SCREW +BVTT 3X8 (S)	
< PHOTO INTERRUPTER >							
PH03	8-729-907-25	TRANSISTOR PT4850F		#3	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
PH04	8-729-907-25	TRANSISTOR PT4850F		#4	7-685-647-79	SCREW, TAPPING	

MISCELLANEOUS							

10	* 1-580-375-21	INLET 3P		#7	7-621-772-10	SCREW +B 2X4	
108	1-590-915-11	WIRE, FLAT TYPE (30 CORE)		#8	7-621-772-00	SCREW +B 2X3	
109	1-590-916-11	WIRE, FLAT TYPE (10 CORE)		#9	7-682-545-09	SCREW +B 3X4	
110	1-590-914-11	WIRE, FLAT TYPE (6 CORE)		#10	7-621-255-45	SCREW +P 2X6	
15	1-555-724-00	WIRE, GROUND		#11	7-621-775-08	SCREW +B 2.6X3	
325	8-848-567-11	DRUM ASSY DOU-03A		#12	7-621-773-86	SCREW +B 2.6X4	
382	1-454-535-11	SOLENOID, PLUNGER (BRAKE)		#13	7-621-775-20	SCREW +B 2.6X5	
383	1-454-536-11	SOLENOID, PLUNGER (BT CONTROL)		#14	7-682-147-15	SCREW, TR	
69	1-518-634-11	LAMP, PILOT		#15	7-621-255-20	SCREW +BVTT 2X4 (S)	
76	△ 1-554-920-21	SWITCH, PUSH (AC POWER) (1 KEY)		#16	7-627-854-07	PRECISION SCREW +P 2X2.5 TYPE3	
77	1-590-321-71	LEAD (WITH CONNECTOR)		#17	7-627-556-17	SCREW, PRECISION +P 2.6X3 TYPE1	
M901-5	A-2003-448-A	MOTOR ASSY (CASSETTE COMPARTMENT)		#18	7-627-852-27	+P 1.7X3	
M902-6	8-835-361-01	MOTOR, DC U-17B		#19	7-621-255-15	SCREW +P 2X3	
M903-7	X-3363-109-1	MOTOR (CAM) ASSY		#20	7-627-552-27	SCREW, PRECISION +P 1.7X2	
M905-7	X-3363-110-1	MOTOR (REEL) ASSY		#21	7-627-552-47	SCREW, PRECISION +P 1.7X4	

ACCESSORIES & PACKING MATERIALS							

1-465-946-11 REMOTE COMMANDER (RM-D2300)							
△ 1-556-760-11	CORD, POWER (3 CORE) (AEP, UK)			#22	7-621-772-08	SCREW +B 2X3	
△ 1-557-377-11	CORD, POWER (US, CND)			#23	7-621-772-18	SCREW +B 2X4	
1-690-665-11	CODE WITH PLUG			#24	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
2-297-913-00	WASHER (DIA. 5), ORNAMENTAL			#25	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
3-754-124-01 MANUAL, OPERATION (US, CND)							
(English, French)							
3-754-125-01	MANUAL, OPERATION (AEP, UK)			#26	7-621-775-10	SCREW +B 2.6X4	
4-933-446-01	SCREW (SIDE PANEL)			#27	7-621-259-39	SCREW +P 2.6X5	
* 4-936-624-01	CUSHION			#28	7-682-660-09	SCREW +PS 4X6	
7-682-276-04	SCREW +RK 5X12			#29	7-684-024-04	N 4, TYPE 2	

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

9-956-675-11

Sony Corporation

Audio Group

- 88 -

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PCM-2300

SONY® SERVICE MANUAL

*US Model
Canadian Model
AEP Model
UK Model*

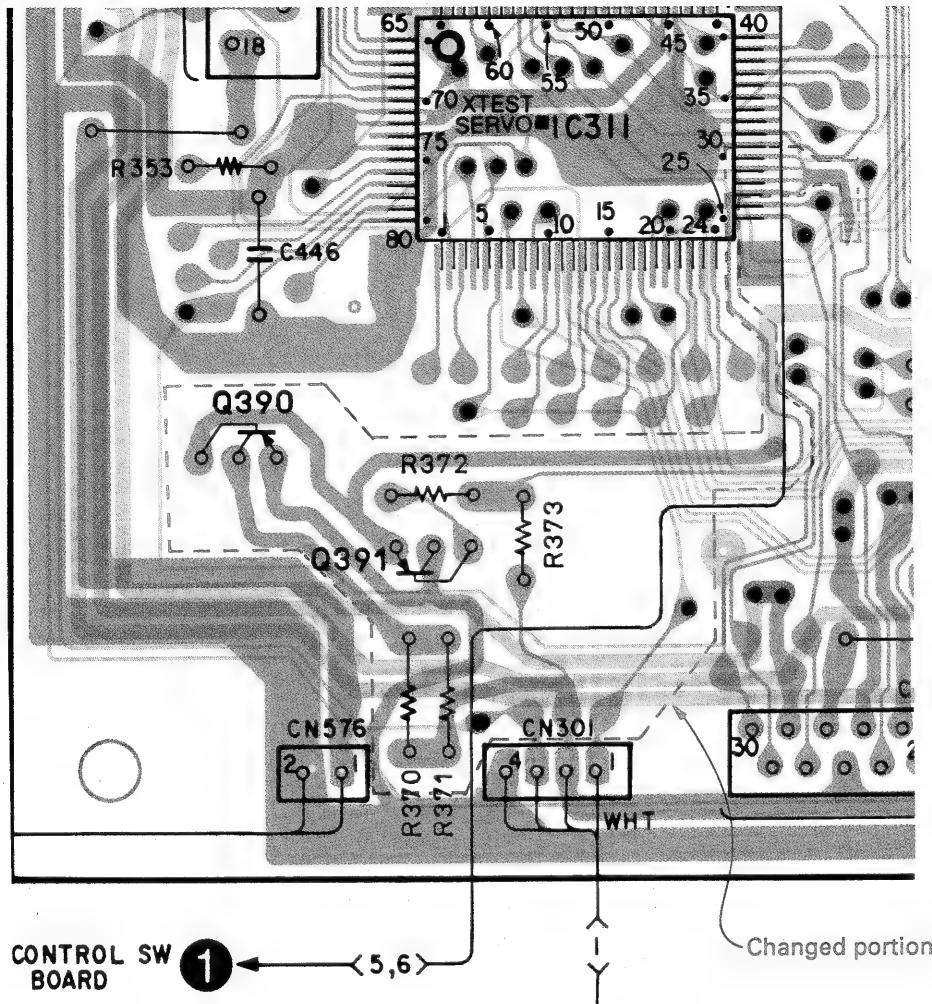
SUPPLEMENT-1

File this supplement with the service manual.

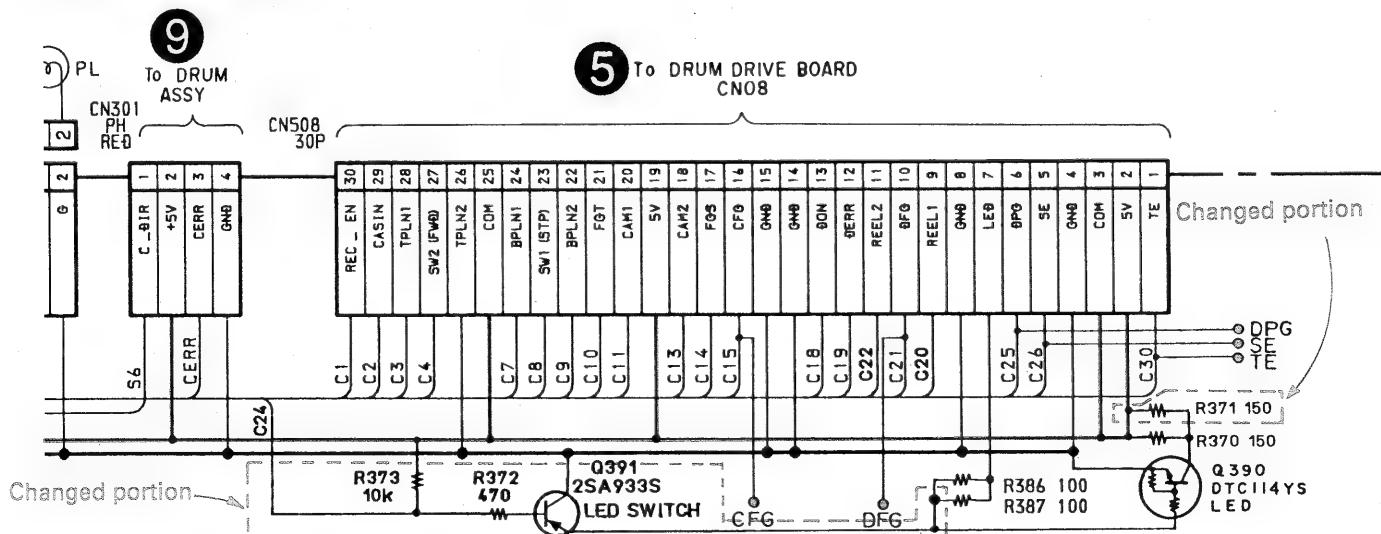
Addition of Main board : Printed Wiring Board and Schematic Diagram

	Ref.No	Part.No	Description				
Parts of Addition	R371	1-249-407-11	CARBON	150	5%	1/4W	
	R372	1-249-413-11	CARBON	470	5%	1/4W	
	R373	1-249-429-11	CARBON	10k	5%	1/4W	
	Q391	8-729-119-76	TRANSISTOR	2SA1175-HFE			

PRINTED WIRING BOARD



SCHEMATIC DIAGRAM



PCM-2300

SONY® SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model

SUPPLEMENT-2

File this supplement with the service manual.

- 1. Service Manual Correction
- 2. FWD torque adjustment procedure change
- 3. Circuit design and board change (SUB board)
- 4. Addition part and change of part

1. Service Manual Correction

 : Corrected portion

Page	Incorrect	Correct
20	<p>FWD Torque Check</p> <p>Check Procedure:</p> <p>3. Confirm that the FWD torque value (take-up side rewinding torque) is between 10 – 20 g·cm (0.14 – 0.28 oz·inch).</p>	<p>FWD Torque Check</p> <p>Check Procedure:</p> <p>3. Confirm that the FWD torque value (take-up side rewinding torque) is between 10 – <u>16</u> g·cm (0.14 – <u>0.22</u> oz·inch).</p>  
20	<p>FWD Back Tension Check and Adjustment</p> <p>Check procedure:</p> <p>3. Confirm that the back tension (supply side) is between 5 – 6 g·cm (0.07 – 0.09 oz·inch). If this is not satisfied, adjust back tension by rotating the FWD back tension adjustment screw equipped on the side surface of the mechanical deck. After completion of adjusting, be sure to apply screw lock.</p>	<p>FWD Back Tension <u>Adjustment</u></p> <p><u>Adjustment</u> procedure:</p> <p>3. Turn the FWD back tension adjustment screw locked on the mechanical deck side so that the minimum value of FWD back tension torque (supply side) is between 4 – 5 g·cm (0.06 – 0.07 oz·inch). Also, make sure that the maximum reading does not exceed 8 g·cm (does not exceed 0.11 oz·inch). After completion of adjusting, be sure to apply screw lock.</p>    

2. FWD torque adjustment procedure change

	Serial Number
US, Canadian model	801, 201 and later
AEP, UK model	600, 451 and later

- Sets with the serial numbers shown above have a new variable resistor (RV301) on the sub board which serves for FWD torque adjustment. The adjustment for these sets should therefore be carried out as described below.

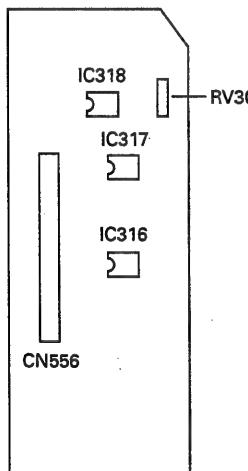
FWD Torque Adjustment:

Adjustment procedure:

- Put the set into the test mode (main + servo) and load the FWD torque meter TW-7131 (8-909-708-71)
- Put the set into the PLAY (►) mode.
- Adjust RV301 so that the minimum value of FWD take up torque (take-up side rewinding torque) is between 10 – 11 g·cm (0.14 – 0.15 oz·inch).
Also, make sure that the maximum reading does not exceed 16 g·cm (does not exceed 0.22 oz·inch).
- Confirm that the value indicated by the torque meter is maintained for one full cycle.

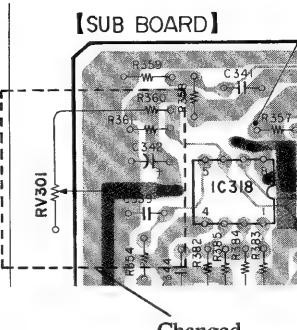
Adjustment point:

– SUB board – (Component side)

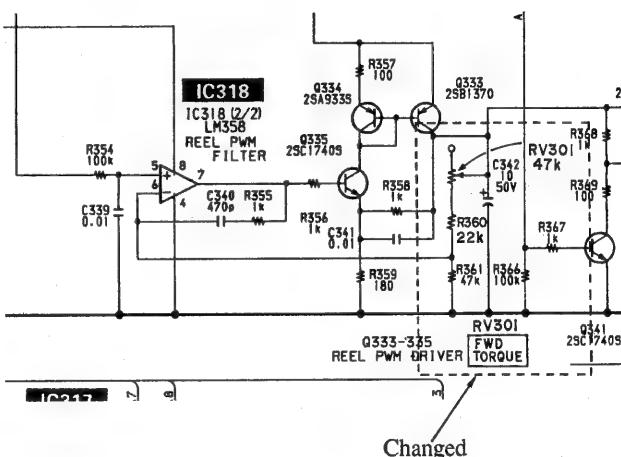


3. Circuit design and board change (SUB board)

Printed Wiring Board



Schematic Diagram



4. Additional part and change of part

Page	Former	New	Remarks
—	—	RV301 1-238-019-11 RES, ADJ, METAL 47K (FWD TORQUE)	Addition
86	R360 43K	R360 1-249-433-11 CARBON 22K 5% 1/4W	Change

PCM-2300

SONY®
SERVICE MANUAL

US Model
Canadian Model
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UK Model

SUPPLEMENT-3

File this supplement with the service manual.

Subject: • Circuit design and board change (MAIN SECTION)
• Electrical parts list

(ECN-TC300248)

ED WIRING BOARDS

N SECTION -

- Refer to page 23 for circuit boards location and 31 for semiconductor lead layouts on original service manual.

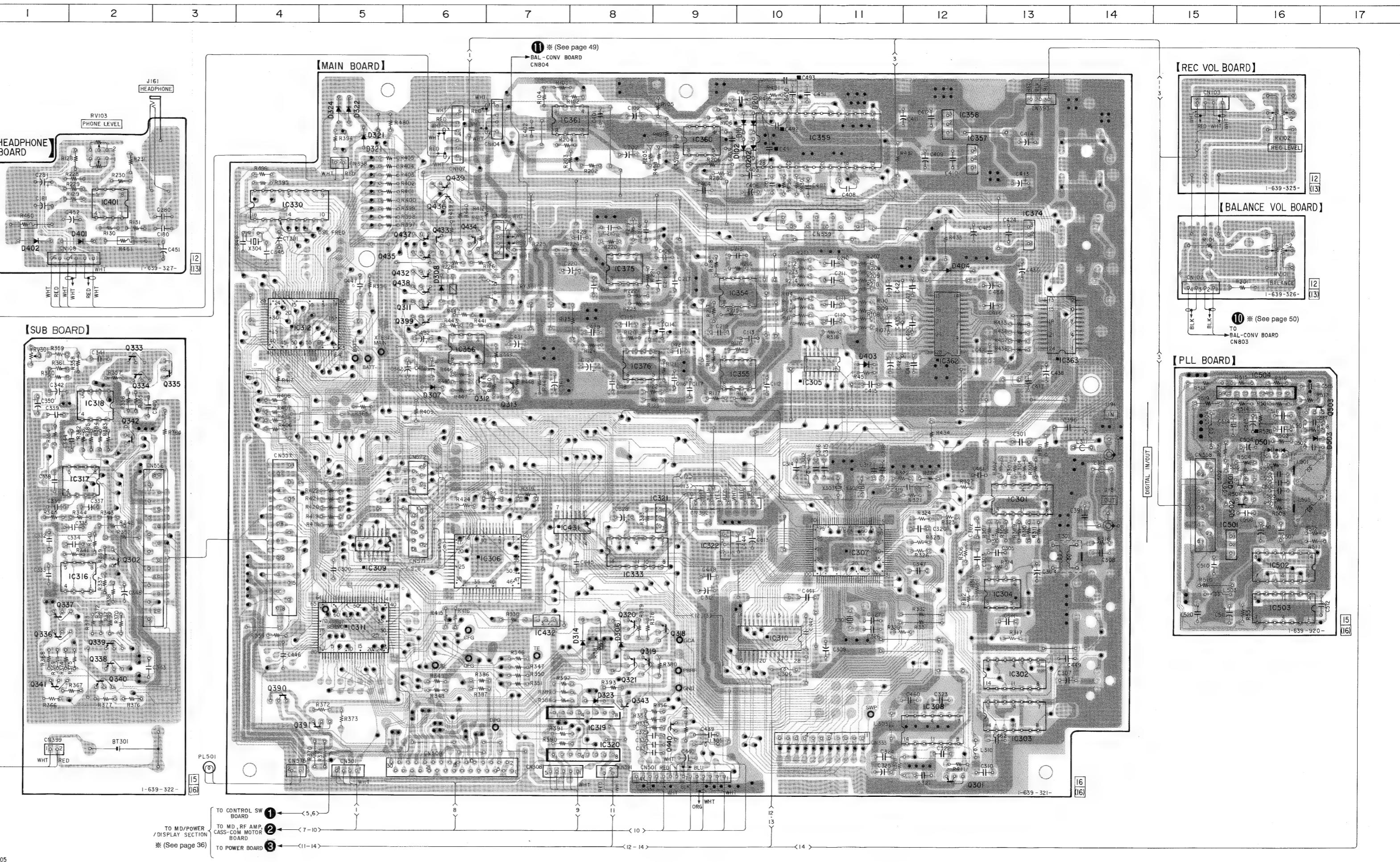
1. DIAGRAMS

- Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	B-10	IC363	D-13
D102	B-10	IC374	C-13
D201	B-10	IC375	C-8
D202	B-10	IC376	E-8
D306	H-8	IC401	C-2
D307	E-6	IC431	F-8
D308	D-6	IC432	H-7
D314	H-8	IC501	G-15
D321	B-5	IC502	G-16
D322	B-5	IC503	G-16
D323	I-8	IC504	E-16
D324	B-5		
D401	C-2	Q301	I-12
D402	C-1	Q302	G-2
D403	E-11	Q311	D-6
D404	C-12	Q312	E-6
D501	F-16	Q313	E-7
D503	E-16	Q318	H-9
		Q319	H-8
IC301	F-13	Q320	H-8
IC302	H-13	Q321	H-8
IC303	I-13	Q333	D-2
IC304	G-13	Q334	E-2
IC305	E-11	Q335	E-3
IC306	G-6	Q336	H-1
IC307	G-11	Q337	H-1
IC308	I-12	Q338	H-2
IC309	G-5	Q339	H-2
IC310	H-10	Q340	H-2
IC311	H-5	Q341	H-1
IC312	D-4	Q342	E-2
IC316	G-2	Q343	I-8
IC317	F-2	Q390	I-4
IC318	E-2	Q391	I-5
IC319	I-8	Q399	D-6
IC320	I-8	Q432	C-6
IC321	F-9	Q433	C-6
IC322	G-9	Q434	C-6
IC330	C-4	Q435	C-6
IC333	G-8	Q436	C-6
IC354	D-10	Q437	C-6
IC355	E-10	Q438	D-6
IC356	D-6	Q439	B-6
IC357	B-12	Q440	I-9
IC358	B-12	Q501	F-16
IC359	B-10	Q502	F-16
IC360	B-9	Q503	E-16
IC361	B-7		
IC362	D-12		

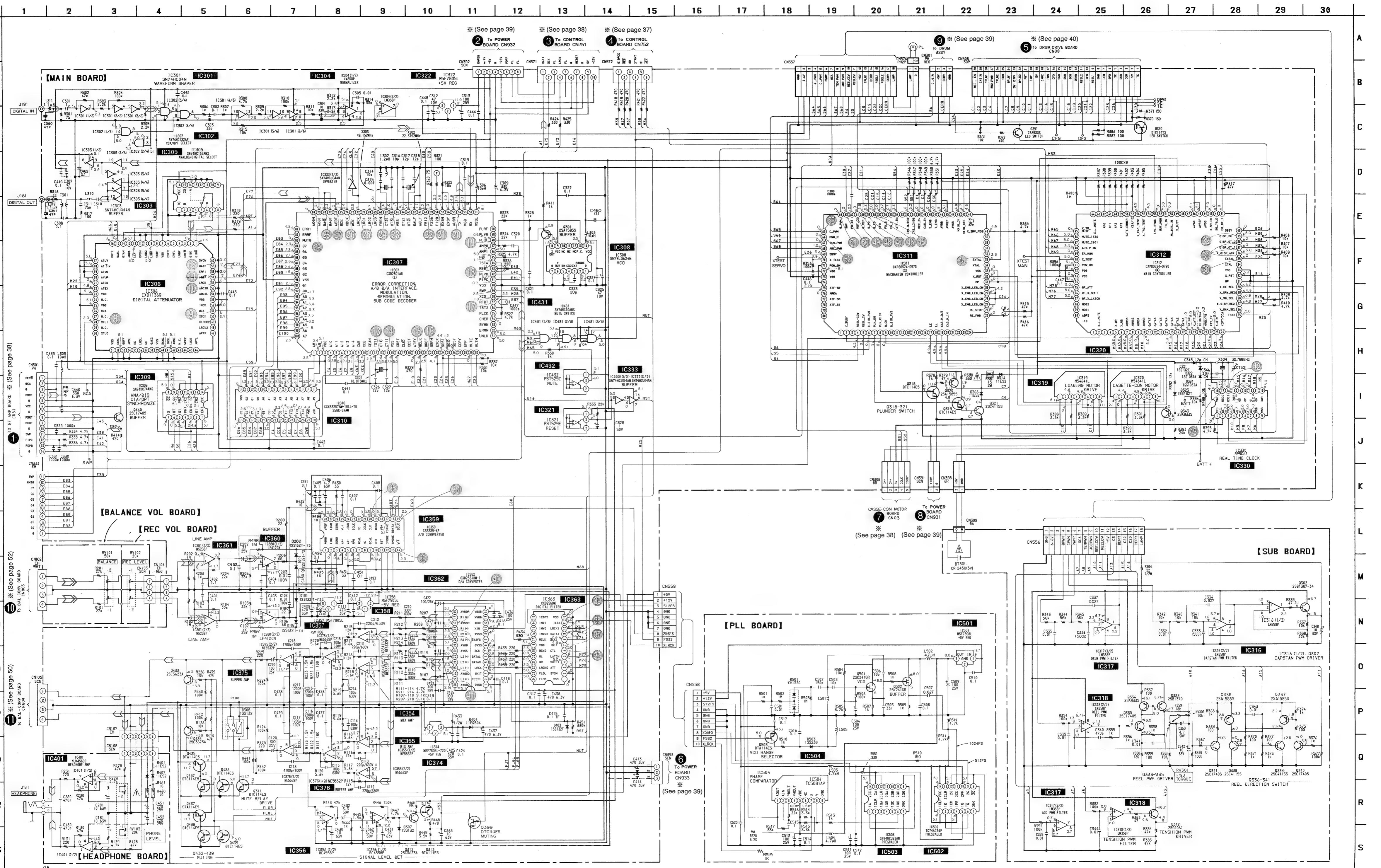
Note on Printed Wiring Board:

- — : indicated a lead wire mounted on the component side.
 - — : indicated a lead wire mounted on the conductor side.
 - : parts mounted on the conductor side.
 - [] : indicates side identified with part number.
 - : Through hole.
 - : Pattern from the side which enables seeing.
 - : Pattern of the rear side.
 - Pages marked with  indicate pages in original service manual.



Schematic Diagram – Main Section

- Refer to page 29 for waveforms, 53 for IC block diagrams and 57 for pin functions on original service manual.



2. ELECTRICAL PARTS LIST

BALANCE VOL

HEADPHONE

MAIN

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

● Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

● SEMICONDUCTORS

In each case, u: μ , for example:

uA... : μ A.. uPA... : μ PA..

uPB... : μ PB.. uPC... : μ PC.. uPD... : μ PD..

● CAPACITORS

uF: μ F

● COILS

uH: μ H

When indicating parts by reference number, please include the board.

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
*	1-639-326-11	BALANCE VOL BOARD			

		< CONNECTOR >			
* CN102	1-564-507-11	PLUG, CONNECTOR 4P			

		< RESISTOR >			
R101	1-259-462-11	CARBON	27K	5%	1/6W
R201	1-259-462-11	CARBON	27K	5%	1/6W

		< VARIABLE RESISTOR >			
RV101	1-238-687-11	RES, VAR, CARBON 50K/50K (BALANCE)			

*	1-639-327-11	HEADPHONE BOARD			

		< CAPACITOR >			
C180	1-162-290-31	CERAMIC	470PF	10%	50V
C181	1-126-059-11	ELECT	10uF	20%	63V
C280	1-162-290-31	CERAMIC	470PF	10%	50V
C281	1-126-059-11	ELECT	10uF	20%	63V
C451	1-126-024-11	ELECT	220uF	20%	25V
C452	1-126-024-11	ELECT	220uF	20%	25V

		< DIODE >			
D401	8-719-200-82	DIODE	11ES2		
D402	8-719-200-82	DIODE	11ES2		

		< IC >			
IC401	8-759-981-96	IC	RC4560D		

		< JACK >			
J161	1-565-327-11	JACK, LARGE TYPE 1P (HEADPHONE)			

		< RESISTOR >			
R128	1-259-468-11	CARBON	47K	5%	1/6W
R129	1-259-444-11	CARBON	4.7K	5%	1/6W

Ref. No.	Part No.	Description			Remark
R130	1-259-468-11	CARBON	47K	5%	1/6W
R131	1-259-412-11	CARBON	220	5%	1/6W
R228	1-259-468-11	CARBON	47K	5%	1/6W
R229	1-259-444-11	CARBON	4.7K	5%	1/6W
R230	1-259-468-11	CARBON	47K	5%	1/6W
R231	1-259-412-11	CARBON	220	5%	1/6W
Δ R460	1-212-857-00	FUSIBLE	10	5%	1/4W F
Δ R461	1-212-857-00	FUSIBLE	10	5%	1/4W F

		< VARIABLE RESISTOR >			
RV103	1-241-537-11	RES, VAR, CARBON 20K/20K (PHONE LEVEL)			

*	A-2006-648-A	MAIN BOARD, COMPLETE			

		< CAPACITOR >			
C102	1-126-233-11	ELECT	22uF	20%	50V
C103	1-130-955-00	FILM	0.01uF	5%	100V
C110	1-136-439-11	FILM	330PF	5%	630V
C111	1-136-439-11	FILM	330PF	5%	630V
C112	1-136-437-11	FILM	220PF	5%	630V
C113	1-136-437-11	FILM	220PF	5%	630V
C114	1-136-433-11	FILM	100PF	5%	630V
C115	1-136-433-11	FILM	100PF	5%	630V
C116	1-136-230-00	FILM	0.0022uF	5%	100V
C117	1-136-228-11	FILM	0.0012uF	5%	100V
C118	1-136-233-11	FILM	0.0047uF	5%	100V
C120	1-124-122-11	ELECT	100uF	20%	50V
C202	1-126-233-11	ELECT	22uF	20%	50V
C203	1-130-955-00	FILM	0.01uF	5%	100V
C210	1-136-439-11	FILM	330PF	5%	630V
C211	1-136-439-11	FILM	330PF	5%	630V
C212	1-136-437-11	FILM	220PF	5%	630V
C213	1-136-437-11	FILM	220PF	5%	630V
C214	1-136-433-11	FILM	100PF	5%	630V
C215	1-136-433-11	FILM	100PF	5%	630V
C216	1-136-230-00	FILM	0.0022uF	5%	100V
C217	1-136-228-11	FILM	0.0012uF	5%	100V
C218	1-136-233-11	FILM	0.0047uF	5%	100V

MAIN

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C220	1-124-122-11	ELECT	100uF	20%	50V	C410	1-136-165-00	FILM	0.1uF	5%	50V
C300	1-162-294-31	CERAMIC	0.001uF	10%	50V	C411	1-126-104-11	ELECT	470uF	20%	35V
C301	1-136-177-00	FILM	1uF	5%	50V	C412	1-136-165-00	FILM	0.1uF	5%	50V
C302	1-164-159-11	CERAMIC	0.1uF		50V	C413	1-126-104-11	ELECT	470uF	20%	35V
C303	1-162-211-31	CERAMIC	33PF	5%	50V	C414	1-126-104-11	ELECT	470uF	20%	35V
C304	1-126-059-11	ELECT	10uF	20%	63V	C415	1-136-165-00	FILM	0.1uF	5%	50V
C305	1-136-153-00	FILM	0.01uF	5%	50V	C416	1-136-165-00	FILM	0.1uF	5%	50V
C307	1-126-022-11	ELECT	47uF	20%	10V	C417	1-164-159-11	CERAMIC	0.1uF		50V
C308	1-164-159-11	CERAMIC	0.1uF		50V	C418	1-136-165-00	FILM	0.1uF	5%	50V
C309	1-124-983-11	ELECT	330uF	20%	6.3V	C419	1-136-165-00	FILM	0.1uF	5%	50V
C310	1-136-177-00	FILM	1uF	5%	50V	C420	1-136-165-00	FILM	0.1uF	5%	50V
C311	1-162-279-31	CERAMIC	75PF	10%	50V	C421	1-136-165-00	FILM	0.1uF	5%	50V
C312	1-126-022-11	ELECT	47uF	20%	10V	C422	1-126-023-11	ELECT	100uF	20%	25V
C313	1-126-023-11	ELECT	100uF	20%	25V	C423	1-126-023-11	ELECT	100uF	20%	25V
C314	1-162-199-31	CERAMIC	10PF	5%	50V	C424	1-136-165-00	FILM	0.1uF	5%	50V
C315	1-162-294-31	CERAMIC	0.001uF	10%	50V	C425	1-126-104-11	ELECT	470uF	20%	35V
C316	1-162-199-31	CERAMIC	10PF	5%	50V	C426	1-136-165-00	FILM	0.1uF	5%	50V
C317	1-162-201-31	CERAMIC	12PF	5%	50V	C427	1-136-165-00	FILM	0.1uF	5%	50V
C318	1-162-201-31	CERAMIC	12PF	5%	50V	C428	1-136-165-00	FILM	0.1uF	5%	50V
C319	1-164-159-11	CERAMIC	0.1uF		50V	C429	1-136-165-00	FILM	0.1uF	5%	50V
C320	1-136-177-00	FILM	1uF	5%	50V	C430	1-126-059-11	ELECT	10uF	20%	63V
C321	1-136-165-00	FILM	0.1uF	5%	50V	C431	1-126-059-11	ELECT	10uF	20%	63V
C322	1-164-159-11	CERAMIC	0.1uF		50V	C432	1-124-273-00	ELECT	3.3uF	20%	50V
C323	1-162-206-31	CERAMIC	20PF	5%	50V	C435	1-126-023-11	ELECT	100uF	20%	25V
C324	1-164-159-11	CERAMIC	0.1uF		50V	C436	1-126-023-11	ELECT	100uF	20%	25V
C325	1-126-022-11	ELECT	47uF	20%	10V	C437	1-124-997-11	ELECT	470uF	20%	6.3V
C326	1-162-201-31	CERAMIC	12PF	5%	50V	C438	1-124-997-11	ELECT	470uF	20%	6.3V
C327	1-162-201-31	CERAMIC	12PF	5%	50V	C439	1-164-159-11	CERAMIC	0.1uF		50V
C328	1-124-903-11	ELECT	1uF	20%	50V	C440	1-124-983-11	ELECT	330uF	20%	6.3V
C329	1-162-294-31	CERAMIC	0.001uF	10%	50V	C441	1-164-159-11	CERAMIC	0.1uF		50V
C330	1-162-294-31	CERAMIC	0.001uF	10%	50V	C442	1-164-159-11	CERAMIC	0.1uF		50V
C331	1-162-294-31	CERAMIC	0.001uF	10%	50V	C444	1-164-159-11	CERAMIC	0.1uF		50V
C345	1-162-201-31	CERAMIC	12PF	5%	50V	C445	1-164-159-11	CERAMIC	0.1uF		50V
C346	1-162-206-31	CERAMIC	20PF	5%	50V	C446	1-164-159-11	CERAMIC	0.1uF		50V
C347	1-162-294-31	CERAMIC	0.001uF	10%	50V	C447	1-164-159-11	CERAMIC	0.1uF		50V
C362	1-126-043-11	ELECT	0.47uF	20%	50V	C448	1-164-159-11	CERAMIC	0.1uF		50V
C363	1-126-059-11	ELECT	10uF	20%	63V	C449	1-164-159-11	CERAMIC	0.1uF		50V
C390	1-162-215-31	CERAMIC	47PF	5%	50V	C450	1-136-165-00	FILM	0.1uF	5%	50V
C391	1-162-215-31	CERAMIC	47PF	5%	50V	C451	1-136-165-00	FILM	0.1uF	5%	50V
C401	1-136-165-00	FILM	0.1uF	5%	50V	C452	1-136-165-00	FILM	0.1uF	5%	50V
C402	1-136-165-00	FILM	0.1uF	5%	50V	C460	1-164-159-11	CERAMIC	0.1uF		50V
C403	1-136-165-00	FILM	0.1uF	5%	50V	C461	1-164-159-11	CERAMIC	0.1uF		50V
C404	1-136-165-00	FILM	0.1uF	5%	50V	C462	1-164-159-11	CERAMIC	0.1uF		50V
C405	1-136-165-00	FILM	0.1uF	5%	50V	C491	1-164-159-11	CERAMIC	0.1uF		50V
C406	1-126-058-11	ELECT	4.7uF	20%	63V	C492	1-164-159-11	CERAMIC	0.1uF		50V
C407	1-136-165-00	FILM	0.1uF	5%	50V	C493	1-164-159-11	CERAMIC	0.1uF		50V
C408	1-136-165-00	FILM	0.1uF	5%	50V						
C409	1-126-104-11	ELECT	470uF	20%	35V						

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark				
< CONNECTOR >											
* CN104	1-564-507-11	PLUG, CONNECTOR 4P		IC319	8-759-633-65	IC M54641L					
* CN105	1-564-507-11	PLUG, CONNECTOR 4P		IC320	8-759-633-65	IC M54641L					
* CN107	1-564-509-11	PLUG, CONNECTOR 6P		IC321	8-759-971-12	IC PST529E					
* CN301	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P		IC322	8-759-231-53	IC TA7805S					
* CN308	1-564-339-00	PIN, CONNECTOR 5P		IC330	8-759-984-34	IC RP5C62					
* CN333	1-564-514-11	PLUG, CONNECTOR 11P		IC333	8-759-917-18	IC SN74HCU04AN					
* CN398	1-564-336-00	PIN, CONNECTOR 2P		IC354	8-759-900-72	IC NE5532P					
* CN501	1-564-716-11	PIN, CONNECTOR (SMALL TYPE) 14P		IC355	8-759-900-72	IC NE5532P					
* CN508	1-568-933-11	SOCKET, CONNECTOR 30P		IC356	8-759-145-58	IC uPC4558C					
CN557	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P		IC357	8-759-231-53	IC TA7805S					
CN559	1-573-296-11	CONNECTOR, BOARD TO BOARD 10P		IC358	8-759-245-79	IC TA79005S					
* CN571	1-568-829-11	SOCKET, CONNECTOR 10P		IC359	8-759-504-36	IC CS5339-KP					
* CN572	1-568-825-11	SOCKET, CONNECTOR 6P		IC360	8-759-972-47	IC LF412CN					
* CN576	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P		IC361	8-759-602-83	IC M5238P					
< TRIMMER >											
CT301	1-141-334-11	CAP, VAR, TRIMMER		IC362	8-752-351-20	IC CXD2561BM-1					
< DIODE >											
D101	8-719-107-94	DIODE 1SS202-1		IC363	8-752-342-65	IC CXD2560M					
D102	8-719-107-94	DIODE 1SS202-1		IC374	8-759-634-55	IC M5F7805L-720					
D201	8-719-107-94	DIODE 1SS202-1		IC375	8-759-900-72	IC NE5532P					
D202	8-719-107-94	DIODE 1SS202-1		IC376	8-759-900-72	IC NE5532P					
D306	8-719-200-82	DIODE 11ES2		IC431	8-759-925-78	IC SN74HC10ANS					
D307	8-719-107-94	DIODE 1SS202-1		IC432	8-759-995-76	IC PST529C					
D308	8-719-107-94	DIODE 1SS202-1		< JACK >							
D314	8-719-200-82	DIODE 11ES2		J181	1-565-406-41	JACK, PIN 1P (DIGITAL OUT)					
D321	8-719-107-94	DIODE 1SS202-1		J191	1-568-750-21	JACK, PIN (1P SHIELD TYPE) (DIGITAL IN)					
D322	8-719-911-06	DIODE 1SS106		< COIL >							
D323	8-719-107-94	DIODE 1SS202-1		L302	1-410-498-11	INDUCTOR 1. 2uH					
D324	8-719-911-06	DIODE 1SS106		L303	1-410-509-11	INDUCTOR 10uH					
D403	8-719-107-94	DIODE 1SS202-1		L305	1-410-509-11	INDUCTOR 10uH					
D404	8-719-210-21	DIODE 11EQS04		L306	1-410-509-11	INDUCTOR 10uH					
< IC >											
IC301	8-759-917-18	IC SN74HCU04AN		L310	1-410-953-11	INDUCTOR, SMALL TYPE					
IC302	8-759-232-49	IC TC74HC132AP		L311	1-410-397-21	FERRITE BEAD INDUCTOR 1. 1uH					
IC303	8-759-917-18	IC SN74HCU04AN		L312	1-410-397-21	FERRITE BEAD INDUCTOR 1. 1uH					
IC304	8-759-135-80	IC uPC358C		< TRANSISTOR >							
IC305	8-759-926-17	IC SN74HC153ANS		Q301	8-729-927-11	TRANSISTOR 2SA1585SQR					
IC306	8-759-947-57	IC CXD1136Q		Q311	8-729-900-80	TRANSISTOR DTC114ES					
IC307	8-752-339-43	IC CXD2601AQ		Q312	8-729-107-85	TRANSISTOR 2SC3623A-K					
IC308	8-759-906-24	IC SN74LS624N		Q313	8-729-900-61	TRANSISTOR DTA114ES					
IC309	8-759-925-90	IC SN74HC74ANS		Q318	8-729-900-80	TRANSISTOR DTC114ES					
IC310	8-752-356-96	IC CXK58257AM-10LL		Q319	8-729-900-80	TRANSISTOR DTC114ES					
IC311	8-752-860-70	IC CXP80524-097Q		Q320	8-729-927-11	TRANSISTOR 2SA1585SQR					
IC312	8-752-843-11	IC CXP80524-079Q		Q321	8-729-927-12	TRANSISTOR 2SC4115SQR					
				Q343	8-729-119-76	TRANSISTOR 2SA1175-HFE					
				Q390	8-729-904-36	TRANSISTOR DTC114YS					
				Q391	8-729-119-76	TRANSISTOR 2SA1175-HFE					
				Q399	8-729-900-80	TRANSISTOR DTC114ES					

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q432	8-729-900-80	TRANSISTOR	DTC114ES	R213	1-249-425-11	CARBON	4.7K 5% 1/4W
Q433	8-729-107-85	TRANSISTOR	2SC3623A-K	R214	1-249-425-11	CARBON	4.7K 5% 1/4W
Q434	8-729-107-85	TRANSISTOR	2SC3623A-K	R215	1-249-430-11	CARBON	12K 5% 1/4W
Q435	8-729-900-61	TRANSISTOR	DTA114ES	R216	1-249-430-11	CARBON	12K 5% 1/4W
Q436	8-729-900-80	TRANSISTOR	DTC114ES	R217	1-249-426-11	CARBON	5.6K 5% 1/4W
Q437	8-729-900-61	TRANSISTOR	DTA114ES	R218	1-249-426-11	CARBON	5.6K 5% 1/4W
Q438	8-729-900-80	TRANSISTOR	DTC114ES	R219	1-249-426-11	CARBON	5.6K 5% 1/4W
Q439	8-729-900-80	TRANSISTOR	DTC114ES	R220	1-249-426-11	CARBON	5.6K 5% 1/4W
Q440	8-729-119-78	TRANSISTOR	2SC2785-HFE	R221	1-247-807-31	CARBON	100 5% 1/4W
	< RESISTOR >			R222	1-249-419-11	CARBON	1.5K 5% 1/4W
R102	1-247-903-00	CARBON	1M 5% 1/4W	R223	1-249-419-11	CARBON	1.5K 5% 1/4W
R103	1-249-417-11	CARBON	1K 5% 1/4W	R224	1-249-441-11	CARBON	100K 5% 1/4W
R104	1-249-433-11	CARBON	22K 5% 1/4W	R225	1-249-409-11	CARBON	220 5% 1/4W
R105	1-249-435-11	CARBON	33K 5% 1/4W	R226	1-249-429-11	CARBON	10K 5% 1/4W
R106	1-249-403-11	CARBON	68 5% 1/4W	R280	1-249-397-11	CARBON	22 5% 1/4W
R107	1-247-854-11	CARBON	9.1K 5% 1/4W	R301	1-247-804-11	CARBON	75 5% 1/4W
R108	1-247-854-11	CARBON	9.1K 5% 1/4W	R302	1-249-437-11	CARBON	47K 5% 1/4W
R109	1-247-854-11	CARBON	9.1K 5% 1/4W	R303	1-249-421-11	CARBON	2.2K 5% 1/4W
R110	1-247-854-11	CARBON	9.1K 5% 1/4W	R304	1-249-441-11	CARBON	100K 5% 1/4W
R111	1-249-425-11	CARBON	4.7K 5% 1/4W	R305	1-249-421-11	CARBON	2.2K 5% 1/4W
R112	1-249-425-11	CARBON	4.7K 5% 1/4W	R306	1-249-417-11	CARBON	1K 5% 1/4W
R113	1-249-425-11	CARBON	4.7K 5% 1/4W	R307	1-249-417-11	CARBON	1K 5% 1/4W
R114	1-249-425-11	CARBON	4.7K 5% 1/4W	R308	1-249-425-11	CARBON	4.7K 5% 1/4W
R115	1-249-430-11	CARBON	12K 5% 1/4W	R309	1-249-421-11	CARBON	2.2K 5% 1/4W
R116	1-249-430-11	CARBON	12K 5% 1/4W	R310	1-249-441-11	CARBON	100K 5% 1/4W
R117	1-249-426-11	CARBON	5.6K 5% 1/4W	R311	1-249-429-11	CARBON	10K 5% 1/4W
R118	1-249-426-11	CARBON	5.6K 5% 1/4W	R312	1-249-421-11	CARBON	2.2K 5% 1/4W
R119	1-249-426-11	CARBON	5.6K 5% 1/4W	R313	1-249-421-11	CARBON	2.2K 5% 1/4W
R120	1-249-426-11	CARBON	5.6K 5% 1/4W	R314	1-249-435-11	CARBON	33K 5% 1/4W
R121	1-247-807-31	CARBON	100 5% 1/4W	R315	1-249-429-11	CARBON	10K 5% 1/4W
R122	1-249-419-11	CARBON	1.5K 5% 1/4W	R316	1-249-397-11	CARBON	22 5% 1/4W
R123	1-249-419-11	CARBON	1.5K 5% 1/4W	R317	1-247-807-31	CARBON	100 5% 1/4W
R124	1-249-441-11	CARBON	100K 5% 1/4W	R318	1-249-409-11	CARBON	220 5% 1/4W
R125	1-249-409-11	CARBON	220 5% 1/4W	R319	1-249-409-11	CARBON	220 5% 1/4W
R126	1-249-429-11	CARBON	10K 5% 1/4W	R320	1-247-804-11	CARBON	75 5% 1/4W
R180	1-249-397-11	CARBON	22 5% 1/4W	R321	1-247-807-31	CARBON	100 5% 1/4W
R202	1-247-903-00	CARBON	1M 5% 1/4W	R322	1-249-429-11	CARBON	10K 5% 1/4W
R203	1-249-417-11	CARBON	1K 5% 1/4W	R323	1-249-433-11	CARBON	22K 5% 1/4W
R204	1-249-433-11	CARBON	22K 5% 1/4W	R324	1-249-433-11	CARBON	22K 5% 1/4W
R205	1-249-435-11	CARBON	33K 5% 1/4W	R325	1-249-425-11	CARBON	4.7K 5% 1/4W
R206	1-249-403-11	CARBON	68 5% 1/4W	R326	1-249-409-11	CARBON	220 5% 1/4W
R207	1-247-854-11	CARBON	9.1K 5% 1/4W	R327	1-249-425-11	CARBON	4.7K 5% 1/4W
R208	1-247-854-11	CARBON	9.1K 5% 1/4W	R328	1-249-417-11	CARBON	1K 5% 1/4W
R209	1-247-854-11	CARBON	9.1K 5% 1/4W	R329	1-249-413-11	CARBON	470 5% 1/4W
R210	1-247-854-11	CARBON	9.1K 5% 1/4W	R330	1-249-417-11	CARBON	1K 5% 1/4W
R211	1-249-425-11	CARBON	4.7K 5% 1/4W	R331	1-249-429-11	CARBON	10K 5% 1/4W
R212	1-249-425-11	CARBON	4.7K 5% 1/4W	R332	1-249-429-11	CARBON	10K 5% 1/4W
				R333	1-249-433-11	CARBON	22K 5% 1/4W

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R334	1-249-425-11	CARBON	4.7K 5% 1/4W	R416	1-249-437-11	CARBON	47K 5% 1/4W
R335	1-249-425-11	CARBON	4.7K 5% 1/4W	R417	1-249-437-11	CARBON	47K 5% 1/4W
R336	1-249-425-11	CARBON	4.7K 5% 1/4W	R418	1-249-413-11	CARBON	470 5% 1/4W
R346	1-249-441-11	CARBON	100K 5% 1/4W	R419	1-249-413-11	CARBON	470 5% 1/4W
R347	1-249-441-11	CARBON	100K 5% 1/4W	R420	1-249-413-11	CARBON	470 5% 1/4W
R348	1-249-441-11	CARBON	100K 5% 1/4W	R421	1-249-413-11	CARBON	470 5% 1/4W
R349	1-249-441-11	CARBON	100K 5% 1/4W	R422	1-249-413-11	CARBON	470 5% 1/4W
R350	1-249-425-11	CARBON	4.7K 5% 1/4W	R424	1-249-411-11	CARBON	330 5% 1/4W
R351	1-249-425-11	CARBON	4.7K 5% 1/4W	R425	1-249-411-11	CARBON	330 5% 1/4W
R353	1-249-441-11	CARBON	100K 5% 1/4W	R430	1-249-399-11	CARBON	33 5% 1/4W
R365	1-249-425-11	CARBON	4.7K 5% 1/4W	R431	1-249-399-11	CARBON	33 5% 1/4W
R370	1-249-407-11	CARBON	150 5% 1/4W	R432	1-249-393-11	CARBON	10 5% 1/4W
R371	1-249-407-11	CARBON	150 5% 1/4W	R433	1-216-349-00	CARBON	1 5% 1/2W
R372	1-249-413-11	CARBON	470 5% 1/4W	R434	1-249-411-11	CARBON	330 5% 1/4W
R373	1-249-429-11	CARBON	10K 5% 1/4W	R435	1-249-409-11	CARBON	220 5% 1/4W
R378	1-249-417-11	CARBON	1K 5% 1/4W	R436	1-249-409-11	CARBON	220 5% 1/4W
R379	1-249-401-11	CARBON	47 5% 1/4W	R437	1-249-409-11	CARBON	220 5% 1/4W
R380	1-249-411-11	CARBON	330 5% 1/4W	R438	1-249-409-11	CARBON	220 5% 1/4W
△R381	1-215-881-11	METAL OXIDE	15 5% 2W F	R439	1-249-437-11	CARBON	47K 5% 1/4W
R386	1-247-807-31	CARBON	100 5% 1/4W	R440	1-249-441-11	CARBON	100K 5% 1/4W
R387	1-247-807-31	CARBON	100 5% 1/4W	R441	1-249-441-11	CARBON	100K 5% 1/4W
R388	1-249-423-11	CARBON	3.3K 5% 1/4W	R442	1-249-441-11	CARBON	100K 5% 1/4W
R389	1-249-423-11	CARBON	3.3K 5% 1/4W	R443	1-249-437-11	CARBON	47K 5% 1/4W
R390	1-249-423-11	CARBON	3.3K 5% 1/4W	R444	1-249-417-11	CARBON	1K 5% 1/4W
R391	1-249-423-11	CARBON	3.3K 5% 1/4W	R445	1-249-419-11	CARBON	1.5K 5% 1/4W
R392	1-249-430-11	CARBON	12K 5% 1/4W	R446	1-247-883-00	CARBON	150K 5% 1/4W
R393	1-247-864-11	CARBON	24K 5% 1/4W	R447	1-249-425-11	CARBON	4.7K 5% 1/4W
R394	1-249-429-11	CARBON	10K 5% 1/4W	R448	1-249-413-11	CARBON	470 5% 1/4W
R395	1-249-425-11	CARBON	4.7K 5% 1/4W	R449	1-249-424-11	CARBON	3.9K 5% 1/4W
R396	1-249-441-11	CARBON	100K 5% 1/4W	R451	1-247-891-00	CARBON	330K 5% 1/4W
R397	1-249-441-11	CARBON	100K 5% 1/4W	R460	1-249-429-11	CARBON	10K 5% 1/4W
R398	1-249-441-11	CARBON	100K 5% 1/4W	R480	1-247-903-00	CARBON	1M 5% 1/4W
R399	1-249-441-11	CARBON	100K 5% 1/4W	R495	1-249-417-11	CARBON	1K 5% 1/4W
R400	1-249-441-11	CARBON	100K 5% 1/4W	R496	1-249-417-11	CARBON	1K 5% 1/4W
R401	1-249-441-11	CARBON	100K 5% 1/4W	R497	1-247-903-00	CARBON	1M 5% 1/4W
R402	1-249-441-11	CARBON	100K 5% 1/4W	R498	1-247-903-00	CARBON	1M 5% 1/4W
R403	1-249-441-11	CARBON	100K 5% 1/4W	R499	1-249-429-11	CARBON	10K 5% 1/4W
R404	1-249-441-11	CARBON	100K 5% 1/4W	< RELAY >			
R405	1-249-441-11	CARBON	100K 5% 1/4W	RY301	1-515-726-11	RELAY	
R406	1-249-429-11	CARBON	10K 5% 1/4W	< COIL >			
R407	1-249-429-11	CARBON	10K 5% 1/4W	T301	1-459-795-11	COIL (WITH CORE)	
R408	1-249-429-11	CARBON	10K 5% 1/4W	< VIBRATOR >			
R409	1-249-425-11	CARBON	4.7K 5% 1/4W	X301	1-567-816-11	VIBRATOR, CRYSTAL (18.816MHz)	
R410	1-249-425-11	CARBON	4.7K 5% 1/4W	X302	1-567-815-11	VIBRATOR, CRYSTAL (22.5792MHz)	
R411	1-249-417-11	CARBON	1K 5% 1/4W				
R412	1-249-441-11	CARBON	100K 5% 1/4W				
R413	1-249-437-11	CARBON	47K 5% 1/4W				
R414	1-249-413-11	CARBON	470 5% 1/4W				
R415	1-249-437-11	CARBON	47K 5% 1/4W				

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MAIN **PLL** **REC VOL** **SUB**

Ref. No.	Part No.	Description	Remark
X303	1-578-667-11	VIBRATOR, CRYSTAL (49.152MHz)	
X304	1-567-098-41	VIBRATOR, CRYSTAL (32.768KHz)	

* 1-639-920-11 PLL BOARD

< CAPACITOR >

C501	1-136-153-00	FILM	0.01uF	5%	50V
C502	1-162-284-31	CERAMIC	150PF	10%	50V
C503	1-162-199-31	CERAMIC	10PF	5%	50V
C504	1-126-023-11	ELECT	100uF	20%	25V
C505	1-162-211-31	CERAMIC	33PF	5%	50V
C506	1-162-199-31	CERAMIC	10PF	5%	50V
C507	1-136-158-00	FILM	0.027uF	5%	50V
C508	1-136-165-00	FILM	0.1uF	5%	50V
C509	1-126-023-11	ELECT	100uF	20%	25V
C510	1-136-165-00	FILM	0.1uF	5%	50V
C511	1-126-023-11	ELECT	100uF	20%	25V
C512	1-164-159-11	CERAMIC	0.1uF	50V	
C513	1-126-023-11	ELECT	100uF	20%	25V
C514	1-136-165-00	FILM	0.1uF	5%	50V
C515	1-136-177-00	FILM	1uF	5%	50V
C516	1-136-165-00	FILM	0.1uF	5%	50V
C517	1-164-159-11	CERAMIC	0.1uF	50V	
C520	1-164-159-11	CERAMIC	0.1uF	50V	

< CONNECTOR >

* CN558 1-573-299-11 CONNECTOR, BOARD TO BOARD 10P

< DIODE >

D501	8-719-901-59	DIODE	KV1320
D503	8-719-903-27	DIODE	ISS168

< IC >

IC501	8-759-604-30	IC	M5F7808L
IC502	8-759-243-64	IC	TC74AC74P
IC503	8-759-917-11	IC	SN74HC393AN
IC504	8-759-250-81	IC	TC5081AP

< COIL >

L501	1-460-042-11	COIL (WITH CORE)	
L502	1-410-324-11	INDUCTOR	4.7uH
L503	1-410-324-11	INDUCTOR	4.7uH
L504	1-410-324-11	INDUCTOR	4.7uH
L505	1-460-042-11	COIL (WITH CORE)	

< TRANSISTOR >

Q501 8-729-200-56 TRANSISTOR 2SK241-GR

Ref. No.	Part No.	Description	Remark
Q502	8-729-200-56	TRANSISTOR 2SK241-GR	
Q503	8-729-900-61	TRANSISTOR DTA114ES	

< RESISTOR >

R501	1-249-417-11	CARBON	1K	5%	1/4W
R502	1-247-903-00	CARBON	1M	5%	1/4W
R503	1-247-903-00	CARBON	1M	5%	1/4W
R504	1-249-429-11	CARBON	10K	5%	1/4W
R505	1-249-428-11	CARBON	8.2K	5%	1/4W
R506	1-249-441-11	CARBON	100K	5%	1/4W
R507	1-249-417-11	CARBON	1K	5%	1/4W
R508	1-249-417-11	CARBON	1K	5%	1/4W
R509	1-249-417-11	CARBON	1K	5%	1/4W
R510	1-249-407-11	CARBON	150	5%	1/4W
R511	1-249-425-11	CARBON	4.7K	5%	1/4W
R512	1-249-425-11	CARBON	4.7K	5%	1/4W
R513	1-249-417-11	CARBON	1K	5%	1/4W
R514	1-249-423-11	CARBON	3.3K	5%	1/4W
R515	1-249-423-11	CARBON	3.3K	5%	1/4W
R516	1-249-433-11	CARBON	22K	5%	1/4W
R517	1-249-435-11	CARBON	33K	5%	1/4W
R518	1-249-417-11	CARBON	1K	5%	1/4W
R519	1-249-417-11	CARBON	1K	5%	1/4W
R520	1-247-850-11	CARBON	6.2K	5%	1/4W
R551	1-249-411-11	CARBON	330	5%	1/4W

* 1-639-325-11 REC VOL BOARD

< VARIABLE RESISTOR >

RV102 1-238-833-21 RES, VAR, CARBON 20K/20K (REC LEVEL)

* A-2006-553-A SUB BOARD, COMPLETE

< BATTERY >

ABT301 1-528-229-11 BATTERY, LITHIUM (CR-2450)

< CAPACITOR >

C332	1-136-153-00	FILM	0.01uF	5%	50V
C333	1-130-473-00	MYLAR	0.0015uF	5%	50V
C334	1-136-158-00	FILM	0.027uF	5%	50V
C335	1-136-153-00	FILM	0.01uF	5%	50V
C336	1-130-473-00	MYLAR	0.0015uF	5%	50V
C337	1-136-158-00	FILM	0.027uF	5%	50V
C338	1-162-306-11	CERAMIC	0.01uF	20%	16V
C339	1-162-306-11	CERAMIC	0.01uF	20%	16V

The components identified by mark **A** or dotted line with mark **A** are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark			
C340	1-162-290-31	CERAMIC	470PF	10%	50V	R364	1-247-731-11	CARBON	22	5%	1/2W	
C341	1-162-306-11	CERAMIC	0.01uF	20%	16V	R366	1-249-441-11	CARBON	100K	5%	1/4W	
C342	1-126-059-11	ELECT	10uF	20%	63V	R367	1-249-417-11	CARBON	1K	5%	1/4W	
C343	1-162-306-11	CERAMIC	0.01uF	20%	16V	R368	1-249-417-11	CARBON	1K	5%	1/4W	
C344	1-162-306-11	CERAMIC	0.01uF	20%	16V	R369	1-247-807-31	CARBON	100	5%	1/4W	
C348	1-126-059-11	ELECT	10uF	20%	63V	R370	1-247-807-31	CARBON	100	5%	1/4W	
C350	1-126-163-11	ELECT	4.7uF	20%	50V	R371	1-249-417-11	CARBON	1K	5%	1/4W	
< CONNECTOR >												
CN556	1-573-300-11	CONNECTOR, BOARD TO BOARD 18P				R372	1-247-807-31	CARBON	100	5%	1/4W	
< IC >												
IC316	8-759-135-80	IC uPC358C				R373	1-249-417-11	CARBON	1K	5%	1/4W	
IC317	8-759-135-80	IC uPC358C				R374	1-249-417-11	CARBON	1K	5%	1/4W	
IC318	8-759-135-80	IC uPC358C				R375	1-247-807-31	CARBON	100	5%	1/4W	
< TRANSISTOR >												
Q302	8-729-801-93	TRANSISTOR	2SD1387-3			R376	1-249-417-11	CARBON	1K	5%	1/4W	
Q333	8-729-024-94	TRANSISTOR	2SB1565F			R377	1-249-441-11	CARBON	100K	5%	1/4W	
Q334	8-729-119-76	TRANSISTOR	2SA1175-HFE			R382	1-249-441-11	CARBON	100K	5%	1/4W	
Q335	8-729-119-78	TRANSISTOR	2SC2785-HFE			R383	1-249-401-11	CARBON	47	5%	1/4W	
Q336	8-729-927-11	TRANSISTOR	2SA1585SQR			R384	1-249-437-11	CARBON	47K	5%	1/4W	
Q337	8-729-927-11	TRANSISTOR	2SA1585SQR			R385	1-249-437-11	CARBON	47K	5%	1/4W	
Q338	8-729-927-12	TRANSISTOR	2SC4115SQR			< VARIABLE RESISTOR >						
Q339	8-729-927-12	TRANSISTOR	2SC4115SQR			RV301	1-230-721-11	RES, ADJ, CARBON 10K (FWD TORQUE)				
Q340	8-729-119-78	TRANSISTOR	2SC2785-HFE			*****						
Q341	8-729-119-78	TRANSISTOR	2SC2785-HFE									
Q342	8-729-209-15	TRANSISTOR	2SD2012									
< RESISTOR >												
R337	1-249-429-11	CARBON	10K	5%	1/4W							
R338	1-249-433-11	CARBON	22K	5%	1/4W							
R339	1-249-401-11	CARBON	47	5%	1/4W							
R340	1-249-429-11	CARBON	10K	5%	1/4W							
R341	1-249-429-11	CARBON	10K	5%	1/4W							
R342	1-249-429-11	CARBON	10K	5%	1/4W							
R343	1-249-438-11	CARBON	56K	5%	1/4W							
R344	1-249-438-11	CARBON	56K	5%	1/4W							
R345	1-249-438-11	CARBON	56K	5%	1/4W							
R352	1-249-441-11	CARBON	100K	5%	1/4W							
R354	1-249-441-11	CARBON	100K	5%	1/4W							
R355	1-249-417-11	CARBON	1K	5%	1/4W							
R356	1-249-417-11	CARBON	1K	5%	1/4W							
R357	1-247-807-31	CARBON	100	5%	1/4W							
R358	1-249-417-11	CARBON	1K	5%	1/4W							
R359	1-249-432-11	CARBON	18K	5%	1/4W							
R360	1-249-408-11	CARBON	180	5%	1/4W							
R361	1-249-431-11	CARBON	15K	5%	1/4W							

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SONY. SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model

CORRECTION-1

Correct your service manual as shown below.

█ : indicates corrected portion.

